BOSTON UNIVERSITY

GRADUATE SCHOOL

THE MEASUREMENT OF ATTITUDE WITH A DESCRIPTION AND EVALUATION OF ATTITUDE TESTS

Thesis

Submitted by

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CHAPTER I.

CONTEMPORARY EVIDENCES OF ATTITUDES.

A, Introduction:

1. Statement of the problem.

Attitudes are very complex, and the measurement of attitudes is difficult. The purpose of this thesis is to demonstrate that attitudes can be measured. Therefore, with this proposition as one of the major aims of the thesis, it is necessary to discuss the nature and the meaning of attitudes, to present the theories and methods of attitude measurement; and to describe and to evaluate attitude tests.

2. A Preliminary Concept of Attitude.

It is necessary at this point to present a preliminary working definition of attitude. In the second chapter of this thesis there is a complete discussion on the "Nature and Meaning of Attitude".

Exactly what is an attitude? Folsom, in his new book, Social Psychology, presents the following illustration:

> "As we look about the room our eyes fasten upon a shapely green tree outside the window to the left. We sit idly looking at it for some moments as we try to think.

> "We then look toward the blank wall of the room toward our right, but our eyes will stay there but an instant. Almost we feel a pull as they turn back again to the left and gaze at the tree." [1]

Already we have found some attitudes - namely, we like to look at trees, and we do not like to look at a blank wall. Both the act of looking and the feeling of pleasure which goes with the looking are reactions or responses. People who live in California are likely to have a different reaction or response toward the Japanese than those who live in Maine or Florida. These reactions or responses may be interpreted as attitudes toward a certain situtation. The different attitudes of the peoples of two sections of this country toward the slavery question was one of the causes of the Civil War. To one who has developed an attitude of appreciation for the music of the great composers, the modern jazz is anathema. To an individual who has developed the attitude of always analyzing every problem before arriving at conclusions, the idea of making a decision before the facts are assembled is unthinkable.

In each of these illustration there exists traces of attitudes. From this preliminary discussion of attitudes

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1 Folsom, Joseph Social Psychology, p. 11.

we can say that an attitude is a feeling "toward an object", a "mind set", a "point of view", or a "tendency to act" in a prescribed manner. This concept of attitude will be thoroughly discussed in the next chapter of this thesis, but for the present, let us use attitude as meaning some of the ideas that are expressed above.

3. The Importance of the Study of Attitudes.

Attitudes are of the greatest importance to the character of the individual. They are the key to his behavior, both real and potential. No adequate understanding of a person may be had except through a thorough knowledge of the attitudes he possesses, of how these attitudes develop, and with what power they operate.

No adequate guidance of leadership of another may be exercised except through the development of certain attitudes. One's whole philosophy of life, or outlook on life, is a matter of attitudes which have been formed, whether it be that of the incurable cynic, or of the most trusting and optimistic believer in life. Attitudes determine largely the whole personality and contribute greatly to individual destinies.

A study of attitudes is important in two ways. In the first place, "it is important from the standpoint of successful

and peaceful living with other people. Obviously it is of great importance to know the emotional and intellectual behavior patterns of a group before formulating any plan for motivation, organization, or control of the group."[1] It is important also, "to be able to recognize the significant types of attitudes in an adjustment situation where it is necessary to guide or divert responses. The orator, actor, salesman, advertiser especially, must be acquainted with the language of attitudes if he wishes to gauge successfully and control adequately his efforts."[2]

In the second place, a knowledge of the process by which attitudes are built up is important from the standpoint of social control. "The social and educational psychologists desire to know how the attitudes are built up and what environmental pressures - educational and social - to bring to bear upon individuals and groups of individuals to build up the desired response mechanisms."[3]

There is obviously great practical usefulness in a reliable method of determining and of measuring attitudes because it would give us a measure of predictability of concrete

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1 Lundberg, George A., Social Research. p. 191.
2 Bernard, L. L. Social Psychology, p. 249.
3 Ibid p. 249.

behavior, "without going to the elaborateness of studying concrete life conditions for after all, the ultimate aim of personality measurement is certainly the devising of short cuts to the prediction of human behavior and thus to afford a means of controlling it."[1]

Lundberg states further "that the attitudes of a group, mostly in the form of symbolic behavior, constitute a large and important part of the phenomena necessary to describe, explain, predict, and control the behavior of the group."[2]

Therefore, the study of attitudes is important, not only from the standpoints of harmonious living, social control and adjustment, and of predictability of human behavior, but also because attitudes are manifested in the whole of life. Since attitudes assume such a prominent role in the whole of life, let us consider some manifestations of attitudes which are apparent in the behavior of man.

B. Manifestations of Attitudes.

Attitudes are dynamic and functioning elements in the entire activity of man. The purpose of this part of the thesis is to picture the existence of attitudes which are revealed in

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1 Young, Kimball. "Measurement of Personality and Social Traits", American Sociological Journal, p. 97, Vol. 21

2 Lundberg, George A., Social Research, p. 200.

the behavior of man. Therefore, a picturization of these attitudes will help the unbeliever to realize that there is a great possibility for the measurement of attitudes. Along with this display of attitudes, the importance and value will be noted.

Attitudes are found to be manifested in all situations of life. Attitudes are revealed in the family, in the community, in the nation, in industry and occupation, in politics, in the schools and colleges, and in religion. Let us review a number of these life situations and examine the types of attitudes that are revealed.

1. In Language.

First of all let us investigate the attitudes that are shown in our language. Attitudes, as manifested in language are important says Young, because "language is the carrier of a vast amount of what we call culture. Knowledge of the past, techniques of sciences, and of food-getting, taboos, and social rituals, all are carried in language."[1]

The whole correlation of thought, language, and behavior depends on intercommunication. In fact communication is basic to social life. Interstimulation and response take place largely in language terms. Ordinarily we are so unconscious of the place

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1 Young, Kimball Social Psychology, p. 203.

of language in social participation that we overlook its significance in interpreting behavior. "Language is at once the modus operandi of social interaction and the carrier of the meanings and values through which our attitudes and habits express themselves."[1]

It is evident that language has its roots in gestures. "A gesture is defined as a motion of the body, head, limbs, especially a movement or action of the hands or face expressive of some idea or emotion or illustrative of some utterance."[2] A grunt, a sigh, a shout constitute gesture just as much as the movements of the facial muscles or the hands. All of the various types of gestures may be thought of as indicating an action to come. In other words, "a gesture denotes an oncoming act, and therefore, in this sense it assumes the characteristic of an attitude."[3]

Of most interest to us in the matter of human speech are the observations which have been made of the gestures of the higher apes. Here we have some indication of the possible roots to our own language. Young states that "Kohler has pointed out that the vocal gestures of the apes are subjective and can only express emotions. They show attitudes of fear, rage, despair,

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1 Young, Kimball Social Attitudes, p. 100.
2 Young, Kimball Social Psychology, p. 205.
3 Young, Kimball Social Psychology, p. 205.

play, and pleasure in vocal gestures."[1]

The voice is also an indicator of attitude. Sapir says "that the voice is, to a large extent, an unconscious symbolization of one's general attitude."[2]

The unconscious symbolisms are of course not limited to the voice. If you wrinkle your brow that is a symbol of a brain attitude. "If you act expansively by stretching out your arms, that is a symbol of a changed attitude of your immediate environment."[3]

With this brief treament of language it is possible to discover that language embodies expressive attitudes. The validation of these attitudes, such as muscular adjustment and expression and emotional reactions, will be psychologically analyzed in a later section of the thesis.

2. In the Family.

There are a number of attitudes expressed in the ordinary family life of an individual. According to Ernest Mowrer, "the family is an organization of attitudes."[4] These attitudes assume the form of intimate identification and consensus between the members of the family with a feeling of common purpose and of common interests.

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1 Young, Kimball Social Psychology, p. 206
2 Sapir, "Speech as a Personality Trait," American Journal of Sociology, Vol. 32, p. 889.
3 Ibid, p. 889
4 Reuter, E. B. and Runner, J.R. The Family, p. 481.

At the outset the individual is thrown upon the care of the family. The relations of members of the family, therefore, may be described in terms of habits, attitudes and values.

A child in his behavior generally finds his models and builds his attitudes in the accustomed behavior patterns, first of the other members of his family, then among his relatives whom he admires or in the neighborhood or at school. Some of his companions also serve as his models. From these patterns which often influence him both directly and indirectly, he acquires his attitudes toward authority. For example, in a study made by E. G. Lockhart[1] concerning the attitudes of children toward certain laws, he discovered that children gradually approached the adult attitude toward law as they advanced through the grades. That is, children in grades 4, 5, and 6 were farther from the adult attitude than were those in high school. The outstanding conclusion was that children did not greatly differ from adults in their attitude toward law.

If the child's parents are critical of the school and his teachers, he reflects this attitude by rebellion or antagonism. If he feels that his parents are fair in their judgements of others or of his own mistakes and misbehavior, the child gets

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1 Lockhart, E.B. "Attitudesof Children Towards Certain Laws", Religious Education, Vol. 25, p. 144

an attitude of fair play which he carries on in his own relations with the people he meets. Whether he considers the rights of other people depends more upon his experience in his family than upon off-repeated precepts. His attitude toward work may be a repetition of that of his parents. Even his sense of humor is largely dependent upon the family mood. In ways of gaining his own ends he is much influenced by the attitudes set by the other members of the family.

For illustrative and explanative purposes of the function of attitudes in early child life let us consider a case study offered by Kimball Young.[1] It is a study of a very brilliant, but erratic man whose attitudes of criticism of the present social, political, and economic order seem distinctly conditioned by his early childhood experiences with his family.

> "His mother was an efficient, fanatically religious woman, full of the notions of sin so dominant in the older generations. The boy was brought up under the most rigid discipline. His curiosity about sex, for example, was completely squelched by his horrified mother. As he lived on a farm he learned a great deal by observation and was colossally misinformed and given a highly colored picture of sex from the vile mouths of hired men. He was forced to attend Sunday School and Church every Sunday. Any infractions of the Puritan

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1 Young, Kimball Social Psychology, p. 247.

> code about Sunday amusements were punished. He could not go walking in the woods nearby. He could not go swimming, hunting, or fishing. Later, in adolescence, he had above all else to keep away from girls. The domination of his moral attitudes by his mother, without any opportunity to learn of life and make some of his own adjustments, the discipline of his conduct within such strict Puritan rules, the gradual growth of perception and idea based on observation of others and contact with groups outside the family, led in the end, to a tremendous revolt. With his study in college it took on particular violence in reference to all forms of organized religion. From this it spread later to radicalism in the field of politics and economics. And the critical ability of this man has kept pace with this development. Yet in spite of this intellectualization of the process, the man has retained a good many rather childish traits."

This discussion emphasizes the fact that within the family constellation there appears the development and the growth of attitudes, favorable and unfavorable, toward the family, authority, school, religion, and personal activities. Mowrer is not far wrong when he says that the family is a unit of attitudes.

3. <u>In Industry and in Occupation.</u>

Closely connected with the attitudes that are manifested in the home are the attitudes that are expressed in industry and occupation. It may be said with a fair degree of certainty that the occupational attitudes of the child arise

from the home. These attitudes may be favorable or unfavorable to the occupation of the parent. The following example gives an illustration of a small boy assuming very early the occupational attitudes of his father.

> "The G. family is made up of two children, a girl and a boy. The father is an attorney for several corporations in which his wife's family and he himself are financially interested. The family conversation and expressions of attitudes and opinions revolve very much around the making of money, business deals, losses, and profits, and prospect for the future. While the father is well educated his whole life is bound up in money-making. The small boy very early began picking up the attitudes of his father. He would invite visitors to play simple card or other games with him for money. He soon became quite a trader among the boys of his neighborhood and, at an early age, began soliciting for newspapers and magazines. As he has grown up, this trait has not changed except in the extent of his money-making activities."1

This machine age, so to speak, has produced certain attitudes in the organization of man's life. The machine has changed the situations toward which a man must orient himself in his material adjustments and thus it has affected his life organization. The artistry of the product is transferred from the man to the machine.

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1 Young, Kimball Social Psychology, p. 321.

Veblen[1] gives us an example of how the routine factory production has a distinct effect upon man's ideas, attitudes, and habits. He says:

> "There results a standardization of the workman's intellectual life in terms of mechanical process, which is more unmitigated and precise, the more comprehensive and consummate the industrial process in which he plays a part....A habit of thinking in other than quantitative terms blurs the workman's quantitative apprehension of the facts with which he has to do....The machine process compels a more or less unremitting attention to phenomena of an impersonal character and to sequences and correlations not dependent for their force upon human predeliction nor created by habit and custom. The machine throws out anthropomorphic habits of thought. The machine technology rests on a knowledge of impersonal, material cause and effect, not on the dexterity, diligence, or personal force of the workman, still less on the habits and propensities of the workman's superiors. Within the range of the machine-guided work, and within the range of modern life so far as it is guided by the machine process, the course of things is given mechanically, impersonally, and the resultant discipline is a discipline in the handling of impersonal facts for mechanical effect. It inculcates thinking in terms of opaque, impersonal cause and effect, to the neglect of those forms of validity that rest on usage and on the conventional standards handed down by usage."

A factor of importance in modern machine production is the building of certain attitudes among employees. Young[2]

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1 Veblen, T. The Theory of Business Enterprise, pp. 308-10.
2 Young, Kimball Social Psychology, p. 328.

in his investigation of occupational attitudes among employees states that the most prominent attitudes are: "the fear of losing one's job, the fear of ill health, and attitudes of anxiety and antagonism between employers and employees."

The employers assume attitudes of superiority, self importance, and an egocentrism, and as Young says: "even the boy or girl brought up in the employer class takes on the attitudes of domination, importance, and superiority."[1]

The laboring groups tend, under stress, to develop antagonistic attitudes toward the employer groups. It is in the strike that the attitudes and habits of the two groups become most apparent. As the employers rationalize their standpoint in terms of classical laissez-faire economics, so the unions develop their defenses in terms of collective responsibility. The final recourse in the struggle between these groups is the strike. Here the antagonistic attitudes and habits gain full sway. There is appeal to the most elemental motive - physical dominance. The employers use spies, company guards, and the police of the political state. The working man's union resorts to equally violent methods. As a result we have little wars going on between these conflict groups within the larger community.

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1 Young, Kimball Social Psychology, p. 330.

In the times of acute labor needs, the unions often win. When there is an over supply of labor, they tend to lose. It is during these periods of active fighting that the conflict attitudes are built up on both sides. These attitudes persist for years among the members of both groups. The workmen repeat to each other and to their friends, their stories of hardship, unemployment, and fighting. The employers relate and remember the destruction of property, the interference with non-union labor, and the general dislocation of industry which resulted from these periods of strife. They called the strikers "Bolsheviks", "radicals", "Reds", "traitors", and "madmen". The workmen, in turn, refer to the strike-breakers as "scabs", "bums", and "traitors to labor", and call the employers "cruel" and "inhuman". In this way the attitudes and opinions of one group are created and nourished.

These illustrations, presenting unfavorable attitudes, are just one side of the industrial situation. Favorable attitudes, as well as unfavorable attitudes, are built up between employer and laborer. Attitudes of cooperation, equality, fair play are the results of the harmonization between workers and employers. The following excerpt illustrates the favorable attitudes that are displayed in the industrial cooperative spirit.

> "Out here in the country we rub shoulders daily. There is absolutely no class distinction, no chasm between employer and employee. We are working as a unit. The men talk about 'our plant'. One of our workers said to a visitor who went through the plant: 'In Chicago I was nobody, but in Elkhorn I am one of its citizens - everybody knows me and speaks to me as I pass them on the street. It is nice to feel that you're someone after all."[1]

Many attitudes are distinctly manifested in what we might call the professional classes; that is doctors, lawyers, engineers, teachers, research scientists, and ministers. Each professional occupation has recognizable attitudes.

The legal profession has played a distinctive role in our political life. The lawyer is directly concerned with the legal formulations which make up so much of present social control, and inevitably he comes closer to many other phases of our group life today than do our doctors or engineers.

> "Customarily he soon develops attitudes of superiority and importance that affect the direction his personality takes. To him the law seems the bulwark of the political state, the economic order, and the public morals. The legally-trained person inclines toward conservatism and caution. He is suspicious of rapid change and tends to rest his thinking rather upon precedent than upon promises of future improvement." [2]

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1 Holton, F "Factory Spirit in the Country", Factory, Vol. 27, p. 49.
2 Young, Kimball Social Psychology, p. 346.

A. E. Briggs[1] made a study of attitudes in regard to the social distance between lawyers and doctors. He says:

> "Their (doctor's) professional bearing notably is quiet and thoughtful. Their patients are not ordinarily in a mood or attitude to be able to weigh properly a doctor's word. Speech is therefore dangerous and the doctor discreetly abstains from talk or uses it quite sparingly. A grave manner is almost as essential to a physician as to an undertaker. People do not like to have their ills dealt with lightly. The doctor therefore gains prestige by the mysteriousness of his silent gravity. Lawyers, to the contrary, live their lives in words.
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> "It is only when lawyers and doctors get into the same social circles that this difference in their arts creates conflict between them...As professions they have little contact. As human beings in society they meet and because their professions have become their very natures, and are such different natures, they understand each other with difficulty. The doctor is incensed by the noisy manners of the lawyer; this is most trying to the physician's reserved dignity. If he cannot maintain silent contempt, he may with cynical disgust bestow the appellation of "windbag" upon the verbose advocate, of which the latter if not unaware of the owlish fluff of the medical man, is self-satisfiedly tolerant.
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> "For geniality also the doctor is more agreeably known. His profession idealizes gentle, kindly demeanor. He soothes his patients. All the arts of pleasantness are appurtenant to the practice of his skills...It is not by these wiles that the lawyer gains his professional ends. His truer part is mandatory, aggressive, disputative."

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1 Briggs, A. E. "Social Distance Between Lawyers and Doctors", Sociology and Social Research, Vol. 133, p. 160-161.

In the research work of Mr. Briggs it was discovered that lawyers tend to have attitudes of conventionalism in their maintenance of legal and customary morality. Doctors, in contrast are likely to have more tolerant attitudes of persons whose moral conduct differs from the cultural norms.

The engineers lack the social solidarity of the doctors and the lawyers. The type of their work is more diffuse and newer upon the economic horizon. They are much more directly dependent upon the captains of industry for their support.

Young says that the engineer, with his severe training in the material sciences, develops distinctive attitudes toward his work. "He is inclined to be mechanistic, analytical, and extremely objective. He leans towards conservatism in economic and political theory."[1]

It is evident from this discussion, that the attitudes which are formed in industrial and occupational situations, have a distinct force and influence upon individual dispositions. Attitudes of antagonism, cooperation, love, hate, liberalism, conservatism as expressed in the behavior of man are determiners of a man's happiness or unhappiness.

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1 Young, Kimball Social Psychology, p. 346.

4. In Prejudices.

Attitudes are expressed in prejudices because social prejudice has had a controlling place in much of our behavior. Many of these behavior patterns have revealed the prejudice attitudes of the individual. For evidence of this fact we ought to examine the negro white prejudice.

Young[1] seems to summarize the problem when he says that the reaction of the negro to the white man in the South even to this day has the features of a caste system, rather than those of pure prejudice, that is to say, the prejudices and attitudes against the negro have been highly standardized in culture patterns. So long as the status quo of superiority and inferiority is not disturbed, all is well. In the South the negro is treated as a person in his infractions of the code. In the North the tendency is to treat him collectively.

The common attitude of the Southerner is that he accepts the negro in his place, as a person, but not as a social or racial equal. A young man from one of the larger Southern cities describes how his attitudes toward the negro were conditioned by personal-social, and cultural influences. Colored men and women are looked upon as servants. "The good ones like to be praised; they know what you want and do it. The common run of negroes are dishonest, lazy, and shiftless".[2] He also told how in later adolescence, his gang

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1 Young, Kimball Social Psychology, pp. 460-467.
2 Ibid, p. 467.

teased and abused negro boys and men when it sought adventures and new experience. While this was all in play, it nevertheless enhanced their attitudes of superiority toward the colored people.

Another instance is a man from Kentucky who expressed common attitudes toward the negro when he said that they were a "shiftless, law breaking, bootlegging, immoral, fighting, lot of people who have to be held constantly in check by police force."[1] This, of course, is an extreme viewpoint.

Although the industrial and commercial changes of the South have also brought social and educational changes, the fact remains that the Southern attitudes are an expression of the general culture levels.

In the North, the negro-white relationships have a different historical setting and present a somewhat different aspect than in the South. The North accepts the negro as a political, if not entirely, as a social equal.

In theory, the North accepts them "en masse", but the North avoids them as individuals. They live in isolated units, and no one has anything to do with them.

With the growth of industry in the North a tremendous number of negroes migrated into Northern industrial cities. This rapid influx produced new attitudes, as it brought new economic and social adjustments.

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1 Young, Kimball Social Psychology, p. 467

Young says: "The Northerners have picked up from the Southerners many attitudes regarding negro inferiority. Attitudes have been built up from reading mammy stories, jokes, tales of negroes, and from the theater, vaudeville and motion pictures. All of these media of communication creates attitudes as well as does rubbing shoulders on a job."[1]

At the present time there is a movement to promote favorable attitudes toward the negro. The following illustration shows to what extent attitudes develop and change as an individual develops educationally.

> "Early in my life, as far back as I have any recollection, I was taught to hate the negro with all the force my childish impulse could muster. To me, all negroes were friends and intent upon killing me if ever they obtained the opportunity. This attitude of hatred for the negro I developed purely from environmental influences inmy home life. The first words I remember having heard my father tell me were to keep away from negroes, that they would harm me.
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> "However as I grew older and began to read here and there about social problems and their relation to the negro I began to have a change of attitude. It did not come suddenly, and even yet my attitude is somewhat influenced by the early training I received. Of course I soon learned that the sole idea in a negro's mind was not to go about killing people. That attitude changed early. But still even after that change I had a tremendous dislike for all negroes.

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1 Young, Kimball Social psychology, p. 472.

> "As I remember it was my second year in high school that first I learned of the narrow ideas that I held of the negro problems. I followed a series of articles that dealt with the situation at length, which told how the only solution of the problem was to educate the negro and to give him a chance. This of course proved highly interesting to me because it was the first inkling I ever had that anyone looked with the least possible hope upon the negro. Up to that time he was in my mind, a social evil which it would be impossible to get rid of.
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> " It was only through continued reading and study that I saw the folly of my stand and that my attitude was based upon a false valuation of the negro entirely. I learned that if he was given a chance to educate himself he would not be a scourge to the state." 1

Racial prejudice and national prejudice have much in common. In Europe nationality attitudes and prejudices have had a distinct growth, especially since the War. These attitudes are rooted deeply in nationalistic rivalries. Antagonistic attitudes between German and France re-stimulated by the War can hardly disappear for generations.

In the United States there exists antagonistic attitudes toward foreigners. Like all other attitudes, prejudices against foreigners and their children are constructed through early conditioning. The home, the neighborhood, the school and the church, all play a part in the process.

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1 Lasker, Bruno Race Attitudes of Children. p. 40-41.

Lasker[1] recently published an analysis of the factors which contribute to the development of prejudices. His book, Race Attitudes in Children is a mine of valuable information. He shows how in the younger children, attitudes of avoidance and antagonism are built up out of fear, cruelty, combativeness, and ridicule and how in adolescence condescension attitudes of a class consciousness are added.

5. In Education.

Knowledge is no longer the sole aim of education. J. Mace Andress says that there are three great aims in education - "knowledge, habits, and attitudes".[2] He states more extensively that attitudes influence the learning process and that attitudes determine lasting interests, and one's adjustment to life. Therefore, says Andress, "education is a failure if it does not stimulate wholesome desires and attitudes."[3] Since knowledge, habits, and attitudes are the three most important general objectives in education today, it is necessary to pause for a moment and consider the factors which are involved in the placing of attitudes as a distinct aim of education.[4]

The oldest of the aims is knowledge. More emphasis

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1 Lasker, Bruno Race Attitudes in Children.
2 Andress, J. Mace "Development of Wholesome Attitudes, National Educ. Assoc. Journal, Vol. 18, p.305
3 Ibid, p. 305
4 Ibid, p. 305-309

has been placed on the realization of this aim than on any other. Even today most of the tests for school achievement are knowledge tests. With the development of modern experimental psychology, educators began to realize that one might have an intellectual grasp of a subject like ethics and still lead an unmoral life, or he might know what was necessary to keep in good health and yet in his daily life, fail to carry out that knowledge.

A more thorough study of the nervous system showed that the human mechanism was intended fundamentally for action. The nervous system is really an intricate bit of machinery connecting sense organs with muscles. The importance of action was emphasized by William James' philosophy of pragmatism in which he affirmed that a thing was true if it worked out successfully in experience. Under the leadership of Thorndike and other psychologists we began to realize that some subjects like penmanship and drawing were primarily valuable only as they led to the forming of habits. There has been a marked revolution in the teaching of hygiene since the school began to understand that health habits rather than knoweldge about health was the chief goal of instruction.

Although few, if any, of our leading educational psychologists have followed Freud in his interpretation and explanation of the human emotions, they have been led to recast

the entire subject of psychology and to call attention to the significance of the emotions in happy and successful living. The mental hygienist and the educator have found the field of emotions rich and stimulating for research and for experiment.

These progressive steps in our educational development reveal some of the major reasons why attitudes are so prominent and important in educational aims.

William Kilpatrick in speaking of new outcomes in education states specifically that an effort must be directed principally toward the development of proper attitudes. He says: "the outcomes that we seek in education are that our young people must build such dynamic outlooks, insights, proper attitudes, and habits, as will enable them to hold their course amid a changing civilization."[1]

Mr. Kilpatrick has aided us to state more authoritatively that attitudes are of importance as controls and determiners in individual behavior.

Therefore, this means a reorganization of the aims and procedures of the schools. Thus, curriculum method must be put on a dynamic basis rather than an old static basis.

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1 Kilpatrick, William H. Education for a Changing Civilization.

A. C. Rosander says:"Since attitudes, appreciations, and ideals are taking their place alongside abilities, and understandings as significant learning products of school education, we find educational committees, principals, and teachers replanning their courses in the light of the attitudes which the subject matter is supposed to develop."[1]

For example, according to one study, history should aim to develop attitudes of loyalty to truth, justice, honesty, tolerance, cooperation, democracy, historical mindedness, scientific mindedness, civic gratitude, intelligent optomism toward social progress, and pride in furthering cultural development.

In a survey of the curriculum subjects of the St. Louis High Schools, Rosander[2] lists the attitudes which are to be developed as definite aims of the subjects.

The St. Louis curriculum committees not only list the attitude aims of the subject but also show at what points in the subject organization the teacher should be striving for each individual aim.

The English Committee[3] gives the following objectives which are of interest to us.

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1 Rosander, A. C. "Can Attitudes Be Measured?" Phi Delta Kappan, Vol. 13, p. 75.
2 Gibbons, Alice "Tests in Social Studies", p. 32-35.
3 Rosander, A. C. p. 75-79.
4 English for the High School, Curriculum Bulletin #22, p. 8. St. Louis, Missouri, Board of Education, 1926.

1. To develop ideals of patriotism and loyalty.
2. To develop ethical standards for home, school, and community relationships.
3. To develop appreciation of good literature.
4. To acquire appreciation of literature both classic and modern of a mature nature.
5. To develop a discriminative use of current literature.

The Physics Committee[1] also sets up some of the attitudes that students in the course should develop.

1. Appreciation of scientific methods.
2. Appreciation of Pasteur and Edison.
3. Open mindedness in problem situations.
4. Appreciation of applied physics.

The History Committee[2] gives a large number of attitudes to be developed in American History, a few of which are given below. These are listed as indirect in contrast to direct outcomes.

1. Attitude of toleration and respect for the sincere religious beliefs of all people.
2. Devotion to American ideals.
3. Appreciation of the heroism and devotion of great American patriots.
4. Attitude of tolerance toward those who hold honest opinions that cause them to oppose the will of the majority.
5. Attitude of tolerance toward political opponents.
6. Development of an attitude of determining to defend American ideals.
7. Attitude of crucial inquiry into the relative value of the returns of war and peace.
8. Attitudes of tolerance toward opposing ideas and beliefs.
9. Development of an intelligent and strong patriotism.
10. Development of a sympathetic attitude of the races to each other.

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1 Physics for the High School, Curriculum Bulletin #31, pp. 8-27. St. Louis, Mo., Board of Education, 1926.

2 American History, Curriculum Bulletin #27, pp. 17-111. St. Louis, Mo. Board of Education, 1926.

11. Development of an attitude of world mindedness.
12. Development of a crucial attitude in considering the policy of the United States toward our neighbors.
13. Development of an attitude in considering a favorable and peaceful settlement of disputes.
14. Development of an attitude of respect for the law.

For another demonstration of the inclusion of attitudes in curriculum building, let us consider the work of the Curriculum Committee at Washington.[1] This committee revised the aims and objectives for the teaching of Nature Study and Elementary Science. The following excerpt is a partial list of the aims to be achieved in the teaching of Nature Study and Elementary Science.

1. Spiritual Aims
   A. Attitude of reverence for the wonderful universe and for its mysterious forces and life.
   B. Attitudes of obedience to the law of love, attitudes of habitual practice of sympathy, humaneness, kindness, patience, diligence, self control, and honesty.
2. Intellectual Aims
   A. Attitude of habitual curiosity concerning truth.
   B. Attitude of open mindedness.
3. Social Aims.
   A. Attitude of reverence for human life.
   B. Attitude of cooperation with others in worthy undertakings.
   C. Attitudes of sincerity, honesty, truthfulness, and reliability in one's dealings with others.

The importance and prominence of attitudes, as educational outcomes, are not only expressed in the subjects of English, Physics, History, and Science, but also in the Home Economic subjects.

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1 The Fourth Yearbook. Department of Superintendence of the N.E.A. Association of the United States. p. 59-113.

Jean Cox[1] has emphasized in a recent magazine article the importance of attitudes in teaching home-making to high school girls.

The courses in family relationships and other aspects of home making which are now so frequently offered to Junior and Senior high school students present certain special problems to the teacher; among them is the importance of developing in the girls an understanding of the role which attitudes play in the personal and family life. In this connection some of the aspects of the general question of attitudes were brought together for the use of the home economics teachers in Utah. These teachers decided that it was important for students to realize that what they were, as well as what they might become, was largely the result of their attitudes.

The problems briefly outlined here might suggest topics to be taken up in class, as a means of showing the girls the importance of attitudes. The objective of these attitude problems was to help the girls to realize that how they did things and how they felt about them might be important factors in their mental health, their efficiency, and their relations with people:

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1 Cox, Jean "Development of Attitudes in Home Economics Courses." Home Economics, Vol. 22, p. 973-76, Dec. 1930.

1. Attitude towards friends depends upon experience with friends.
2. Attitude toward educational values in art and music depends upon what one knows.
3. An important principle in education is the establishment of the right attitude for learning to like the right thing.
4. A progressive individual needs the attitude which recognizes that nothing is static.
5. The sane attitude toward fear or anxiety is that it can be overcome.
6. The general attitude toward life and work is an important factor in mental health.
7. Right attitude is essential in case of illness.
8. Wrong attitudes in the home make life miserable.

It is possible to say that the character education movement in the school systems is, in a large way, responsible for the establishment of attitude development in course aims and objectives. Let us consider for a moment the features of our character educational work.

It is generally recognized that the public school has had a unifying and a stabilizing effect on society. While it is true that the School has emphasized intellectual achievement, it is likewise true that it has exercised a wholesome moral influence. There is much of moral value which has resulted from the efforts of the teachers to inculcate into the minds of young people worthy ideals and attitudes.

C. W. Jensen, State Superintendent of Public Instruction of Salt Lake City, Utah, says:" that workers in the character

education field are coming to believe that the school should place greater emphasis on the establishment of attitudes, ideals and habits, because they have so much to do with the moral welfare of the individual and society."[1]

One of the general objectives in the Character Education program of Salt Lake City Public Schools is as follows:[2]

To cultivate from the beginning habits and attitudes to the realization of the general objectives of character education. These habits and attitudes include the following:

1. An attitude of willing acceptance for personal and social responsibility.
2. Attitudes of justice, fair play, honesty, truthfulness, and honor, enobled by moral thoughtfulness and made effective through the exercise of moral imagination - the ability to foresee vividly the possible consequences of both good and evil conduct.
3. Habitual attitudes of appreciation and gratitude toward all benefactors; also attitudes of courtesy and consideration for the comfort and happiness of all.
4. An attitude of loyalty in thought, word, and deed, to the highest ethical and moral standards of the family, the school, the church, the state, and of all related civic and social institutions.
5. An attitude of faith in every good cause and of reverence for all that is good.

It is interesting and valuable to note the distinct place and importance of attitudes in character education. In the Fourth Yearbook of the Department of Superintendence,

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1 Character Education (Supplement to the courses of study in the Elementary and High Schools of Utah) Department of Public Instruction, June 1929, p. 5.

2 Ibid, p. 10

one of the ways suggested of securing character educational results was through attitudes and relationships.[1] The Committee on Character Education made a questionnaire survey of three hundred (300) school systems that were enrolled in the Cooperative Plan of Curriculum Revision. The following excerpt validates the statement made above that attitudes and relationships are important factors in character educational results:

> "Attitudes and relationships are suggested as ways of securing character educational results, because of the influence of the teacher through proper example and character; and because attitude is named most frequently as the chief determinant in the development of good character in pupils."[2]

Suggestions of attitudes and relations as ways of securing character educational results were mentioned a total of 107 times on the 229 questionnaires returned; 25 times under the head of the classroom recitation; 36 times in connection with other classroom relations; and 46 times in the life of the whole school. It is apparent that, at least in the opinion of those returning the questionnaires, classroom and school attitudes and relations, are of considerable importance in the promotion of character education.

In the same survey of three hundred school systems enrolled in the Cooperative Plan ofCurriculum Revision, there

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1 The Fourth Yearbook, Department of Superintendence of the N.E.A. Third printing, p. 383.

2 Ibid, p. 386

was a statement asked concerning the outcomes of character education. Practically all of the respondents to the questionnaires included a list of traits and attitudes. These were grouped as far as possible under the general headings and tabulated by frequency of mention as desirable character education outcomes.

The following table[1] lists the fifteen desirable character education outcomes resulting from various school contacts, (classroom recitation, other classroom relations, and life of the school as a whole) arranged in order of frequency of mention.

It will be noted that while there is a rough correspondence in ranking on the various items in the several distributions, particularly on a few of the outcomes, such as cooperation, courtesy, judgment, and initiative, the distribution seems to be peculiar to each of the lists.

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1 The Fourth Yearbook, p. 390.

This table lists the desirable attitudes and traits as character outcomes, according to rank, total mention, classroom recitation, other classroom relations, and in school life as a whole.

RANK	TOTAL MENTION	CLASSROOM RECITATION	OTHER CLASSROOM RELATIONS	IN SCHOOL LIFE AS A WHOLE
1	2	3	4	5
1	Courtesy	Honesty	Courtesy	Loyalty
2	Honesty	Courtesy	Cooperation	Responsibility
3	Cooperation	Industry	Justice	Conformity
4	Loyalty	Cooperation	Loyalty	Cooperation
5	Conformity	Independence	Conformity	Courtesy
6	Responsibility	Responsibility	Honesty	Justice
7	Justice	Justice	Industry	Service
8	Industry	Promptness	Service	Independence
9	Independence	Accuracy	Independence	Honesty
10	Service	Conformity	Self-Control	Independence
11	Self Control	Self Control	Responsibility	Self Control
12	Promptness	Loyalty	Sportsmanship	Judgment
13	Judgment	Initiative	Judgment	Order
14	Accuracy	Judgment	Fraternity	Promptness
15	Sportsmanship	Leadership	Initiative	Fraternity

It seems evident from this discussion that educators and teachers are beginning to realize that attitudes are real, so real in fact, that if schools fail to establish wholesome attitudes in the child's training they will fail ignominiously. Facts are important, but the mere knowledge of facts is unimportant unless one has the proper attitude toward such knowledge.

A child may master the facts about the life of Washington, and yet hate Washington. The important thing is not only the facts but also the attitudes. To love Washington, to desire to emulate his honesty and courage, to be a splendid citizen like him - these are the things most worthwhile.

6. In Religious Education.

Religious education seeks to bring religious ideas, attitudes, and motives, as conditioning and controlling factors into every relation and function involved in human life. Ernest Chave of Chicago University says "that in the process of religious education one of the most significant factors to be considered is the development or modification of attitudes."[1]

For example in the Christian Religions we find both Catholics and Protestants. Here is a man who strives to live a good Christian life but hates the Catholics. He has an antagonistic attitude toward all their beliefs and works. The function of religious education, in this instance, is to modify this man's antagonistic attitudes. If this man desires to live a good Christian life and wants to reveal Christian attitudes in his life, it is necessary to teach him that he must become a friend of the Catholics and not an enemy.

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1 Thurstone, E. L., and Chave, E. J. Measurement of Attitude, p. ix

The goals of modern religious education do not simply involve the attainment of certain bodies of knowledge such as the Bible, creeds, and doctrinal statements, history of religions and other records of religious experience, but they are more closely related to the actual behavior of persons in society.

In other words, a person may obtain all the factual knowledge of the Bible, but fail utterly to demonstrate to his neighbor the brotherliness and friendliness suggested by Jesus.

Religious education includes all efforts and processes which help to bring children, young people, and adults into a developing and deepening fellowship with Christ which will find expression in attitudes and habits of Christlike living in common life and in all human relations.

Therefore, it can be said that one of the major purposes of religious education is to foster the growth and development of right attitudes in the life of the individual.

Chave[1] further states that religious education is interested in all social attitudes. In so far as a person has an attitude that is in the direction of the life-goals approved by religious standards, religious education seeks to develop and motivate such with religious faith, purpose, and passion.

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1 Chave and Thurston Measurement of Attitudes, page x.

In so far as the expression of any social attitude may reveal a life set in a direction not approved by religious standards, religious education seeks to change the tendency and redirect the life toward the more ideal religious goal.

Thus a man who has a favorable attitude toward the Catholics is encouraged to develop his friendliness and brotherliness; and a man who has an antagonistic attitude toward the Catholics is redirected in his thinking toward the establishment of a more favorable attitude.

In the last fifteen years the curricula methods and materials of religious education have been changed many times in a desire to promote satisfactory religious habits and attitudes in children, youth, and adults.

Dr. Hugh Hartshorne, in his notable studies of Christian worship for children states that one of the first things a church school should do is "to develop ideas, attitudes, and purposes that signify a filial relationship to God."[1] Attitudes of faith, hope and love; and loyalty, gratitude, and reverence are the fundamental Christian attitudes which the Church should strive to develop.

Since this discussion of attitudes in the curriculum of religious education, by Dr. Hartshorne, there has been a growing emphasis for the development of attitudes.

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1 Hartshorne, Hugh Manual for Training in Worship. p. 3.

Consider the new curriculum objectives[1] set forth by the International Council of Religious Education where a great emphasis and importance is given to attitudes. The following is a partial list of the objectives:

1. Attitudes of dependence, trust, obedience, and gratitude to God as a reality in human experience.
2. Attitudes of appreciation for the personality, life, and teaching of Jesus as will lead the individual to experience him as Savior and an attitude of loyalty to him and his cause.
3. A progressive and continuous development of Christlike attitudes.
4. Attitudes of reverence and respect for the personality of other human beings.
5. Attitudes of cooperation and participation in the organized society ofChristians - the Church.
6. Attitudes of appreciation and understanding of the Bible and an attitude of fair-mindedness toward the best in the thought and experience of all religions.

At the present time, through the missionary work of the Church, there are distinct evidences of attitudes toward world peace, a world society, racial improvement, social idealism, international and interracial respect and cooperation.

The churches and many other institutions are promoting missionary education, or better, the newer term recently suggested "education for world mindedness". Albert Murphy[2] of Columbia University states the following aims and objectives in education for world mindedness and enlightened missionary education.

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1 "Curriculum of Religious Education", Educational Bulletin #101 International Council of Religious Education, pages 21-34.
2 Murphy, Albert J. Education for World Mindedness, pp. 13-150.

It is important to note that these objectives are attitudes which are to be developed by the church or other institutions for missionary work.

Attitudes should be developed with respect to:

1. Appreciation, respect, insight, and social imagination.
2. Good will, love, passion for humanity, sympathy, unselfishness, and peacefulness.
3. Brotherliness, fellowship, mutuality, sense of community, democracy, and friendliness.
4. World-mindedness, universality, large group consciousness, and cosmopolitanism.
5. Open-mindedness, scientific attitude, intellectual honesty and reasonableness.
6. Humility, consideration, self criticism and respect for others.
7. Tolerance, loyalty, devotion, consecration and self sacrifice.
8. Stewardship, sense of obligation and service.

In a study of Christian Character Traits by Paul Vieth[1] and the International Council of Religious Education[2], there was set forth a group of twenty-two traits that displayed a number of important attitudes for religious education.

Two examples from this study will be presented in order to see the results of this study:

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1 Vieth, Paul Objectives in Religious Education, pp. 66-69.
2 "Curriculum of Religious Education" #101, pp. 64-74.

GOODWILL No. 7

		Positive Elaboration.
Altruism	Humanitarianism	Promoting prosperity and success of others.
Compassion	Kindness	
Congeniality	Neighborliness	Regarding human life as end, notmeans.
Consideration	Peaceableness	Respect for human life and personality.
Courtesy	Social Mindedness	Striving for fullness of life for others.
Gratitude	Sympathy	Unselfish love for others.
Hospitality	Understanding	Stimulating latent possibilities in others.
		Large group consciousness.
		Actively seeking for harmonious relations.

		Negative Elaboration.
Antagonism	Indifference	Discourteous in public.
Covetousness	Quarrelsomeness	Disagreeable in dealing with others.
Discourtesy	Rudeness	Unfriendly towards neighborhood and strangers.
Egotism	Selfishness	Insensibility to interest and needs of the larger group.
Enviousness	Unkindness	
Impatience		Lack of respect for life and personality.
		Seeking selfish ends.
		Racial and group prejudice

LOVE No. 12.

Positive Elaboration

Affection	Unselfish love of fellow men.
Generosity	Denying one's appetite or desires in the
Gratitude	interest of one's own higher good or the welfare of others.
Self-denial	Sacrifice of personal interest in the interest
Service	of the greater good.
Understanding	Foregoing riches and positions to follow a career of service.
Sympathy	Not self-centered, but eager to serve.
Unselfishness	Fellow feeling
	A sincere love of God and the work of the kingdom.

Negative Elaboration

Appropriation	Seeking selfish interest
Hard-heartedness	Unwilling to sacrifice for others
Hate	Ungrateful and thankless
Selfishness	Revengeful; malevolent toward enemies.

The total number of traits discussed were as follows:

Cooperation	Faith	Honesty
Courage	Forgiveness	Humility
Creativeness	Goodwill	Joyousness
Dependabilityn	Health Mindedness	Love
Loyalty	Penitence	Reverence
Obedience	Purity	Self-Control
Open-mindedness	Purposefulness	Self-Respect
		Spirituality.

From this discussion it is evident that attitudes play an important part in man's religion. Successful religion is a matter of proper attitudes toward God and man. The chief task of religious education is to foster and to develop attitudes of faith, hope, love, loyalty, gratitude and reverence toward God and man.

C. Possiblity of Measurement.

Measurement is necessary to the acquisition, extension, or utilization of all fields of knowledge. Measurement, as Russell says, "is a precision instrument necessary in research, an exact tool necessary to experimentation, and a means by which knowledge can be made available for use."[1]

Progress is dependent upon the measures in which man is able to deal. It is remarkable that Galileo, with the crude instruments for the measurement of time and distance at his command, was able to accomplish the scientific advances which he made.

For many centuries man was handicapped in his pursuit of knowledge by the crudity of his measuring instruments. However when the measuring units themselves were refined, great results were possible even with crude instruments of measurement.

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1 Russell, Charles Standard Tests, page 3.

Money was invented by men as a convenient basis of measuring and of expressing value. It developed through a series of successive levels, beginning with barter, then the use of objects, such as beads and shells; then crude metallic forms, to our present system of money which includes paper bills, and indirect means of indicating value such as bonds, trade acceptances, and bills of exchange.

Similarly the clock, as we have it today, advanced from crude units of measurement as moons, days, candle clocks, water clocks, sun dials, sand glasses, to the accurate time-pieces of the present day controlled by electricity which can measure time in fractional parts of a second.

What has taken place in these other fields of human knowledge and endeavor is now taking place in the field of education. Measurement and the means of measurement are of as much importance,and offers as much hope for the future, in this as in any other field of human interest.

Ever since Thorndike made the statement, now accepted as a truism, that "whatever exists at all exists in some amount"[1] its practical implication has been that anything that exists in amount can be measured.

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1 Thorndike, E. L. Measurement and Education. 21st Year Book of National Society for the Study of Education, Part I, p. 1

Since the invention of money for the measuring and expressing of value and the construction of clocks for the measuring of time, Thorndike makes the statement that "education is one form of human engineering and will profit by measurements of human nature and achievement, as mechanical and electrical engineering have profited by using the foot-pound, the calorie, the volt, and the ampere."[1]

There was a storm of protest by educators when Dr. J. M. Rice, a little more than twenty years ago, published his studies of applying scientific measurement to the results of teaching. From this protest it was apparent that some of the educational leaders did not approve the advancement made by the future-mindedness of Dr. Rice.

According to Wilson and Hoke[2], the present movement started with studies of a somewhat different nature, such as Thorndike's notable study on "The Elimination of Children from School", and studies by Strayer and Elliot upon school costs. The application of scientific methods to these phases of education was received with more favor by educators and the emphasis was gradually shifted to the measurement of subject matter through the use of scales and standardized tests. Thus, after two decades Dr. Rice's pioneer-viewpoint was accepted and his methods improved upon.

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1 Thorndike, E. L. Measurement and Education Part II, p. 16
2 Wilson, Guy and Hoke, Kremer How to Measure, p. 3-4.

At the present time there are scores of tests for the measuring of native factors in intelligence and hundreds of tests for the measuring of specific mental abilities, skills, and talents. Scientific tests of specific kinds of performance, comprehension, reasoning ability, and judgment are a commonplace in the modern classroom. Most every college laboratory in psychology is equipped with instruments and devices for measuring the multiform reactions of the nervous mechanism. Specialists, not only in the colleges, but in industrial and mercantile enterprises, and in personnel bureaus are using numerous technical methods for determining, with more or less accuracy, the fitness and aptitude of people for vocational tasks. Thus, it is possible to see the growth of measurement in importance and in usefulness to man and to society.

One of the more recent developments in the field of measurement is the measuring of attitudes. It is impossible to deny the existence of attitudes in the nature of man, because, as we discovered, attitudes play an important role in the life of man. The problem in the measurement of attitudes is to determine to what degree and depth attitudes exist.

D. Summary.

The problem which this thesis is concerned with is the measurement of attitudes. Measurement is a practical and useful instrument because it places at the disposal of the research worker available materials and information that are reliable.

A study of attitudes is important because their evidences are displayed in language, in the family, neighborhood, community and state, in politics, industry and occupations, in international and racial prejudices, and in education and religion.

This discussion has clearly demonstrated that attitudes are found in all of life and that they exist in amounts, degrees, and depths, and that the aim of education is to develop and to modify attitudes.

Hertzler says "that attitudes play a crucial part in social progress".[1] The wrong attitudes may block progressive measures everywhere, while without the right attitudes no progress can occur.

Personal and social progress is a matter of change in attitudes. Bogardus says, "if we can find out how to change attitudes we shall have the key to progress".[2]

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1 Hertzler, Joyce Social Progress, p. 105-106.
2 Bogardus, Emory Fundamentals of Social Psychology, p. 61.

All education is interested in the production and the development of useful attitudes in the life of the individual. To do this it is necessary to have some indicator to tell in what amounts attitudes exist.

Thus this study of the measurement of attitudes is highly important, not only because attitudes are dynamic elements in the whole of life, and the keys to social progress; but also because it is vital to estimate and indicate on a scale the growth and modification of attitudes.

CHAPTER II.

THE NATURE AND MEANING OF ATTITUDE.

A. The Problem of Definition.

1. Introductory Statement.

Attitude is a term which has recently come into a very general use among sociologists, psychologists and writers on education. Carl Jung[1] says that the concept of attitude originated with Muller and Schumann.[2]

It is not an easy task to define the term attitude. There exists almost a hopeless confusion in the current usage of the term because the meaning of attitude is as varied as there are writers. Bain says that attitude"is a good example of an ill-defined, or undefined, concept used in a loose, pseudo-scientific manner."[3]

A critical examination of the concept "attitude" reveals that it is all things to all men; it is seldom used consistently by any one writer; it is normative, valuative and subjective; it refers to verbal responses, opinions, habits, vegetative processes, tendencies to act, impulses to act, inhibitive impulses, feelings, wishes, values, motor sets, and various combinations of these.

2. The Various Conceptions of Attitude.

In order to have a good background for the discussion of the nature and meaning of attitude, it is necessary to present

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1 Jung, Carl Psychological Types, p. 536.
2 Pfluger's Archive, Vol. 45, p. 37 (Jung's authority)
3 Bain, Read "An Attitude on Attitude Research", American Journal of Sociology, Vol. 33, p. 942.

the ideas of some of the outstanding authorities in the field of attitude study. A short discussion of these ideas will be given at this point, while the more critical study will be presented in the analysis of the psychological nature of attitudes.

a. Kimball Young:[1]

Attitudes are essentially motor sets of the organism toward some specific or general stimulus. They rest upon innate stimulus - response patterns as these have been modified, elaborated, and integrated together through learning. These integrations become reduced again to "sets or tendencies" to action. In fact the keynote to Young's interpretation is that an attitude partakes the nature of an "incipient reaction". Attitudes are found in likes, dislikes, avoidances, approaches, withdrawals, appreciations, hatreds and loves.

b. Carl Jung:[2]

Attitude is the "readiness of the psychic to act or to react" in a certain direction. That is, to have a certain attitude means to be ready for something definite, even though this definite something is conscious or unconscious. The state of readiness in which Jung conceives attitude to be always consists in the presence of a certain subjective constellation, a definite

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1 Social Psychology, pp. 137-139.
2 Psychological Types, pp. 526-528.

combination of psychic factors or contents which will either determine action in this or that definite direction, or will comprehend an external stimulus in this or that way.

c. Emory Bogardus:[1]

For Bogardus an attitude is a tendency to act toward or against some environmental factor which becomes thereby a positive or negative value. It is less innate than a desire, more clearly defined, more definitely selected by a person, and more cognitive. It incorporates not only affective and cognitive, but volitional elements. In conclusion he says that action is the evidence of an attitude.

d. Joyce Hertzler:[2]

Attitudes appear to function like habits; that is, "deep seated habitual ways of reacting to life". They have to do with motive, the control of motive, the impulse back of action, the extra intellectual forces and controls that determine specific actions. At any rate they cause the individual to arrive at decisions and judgments that affect his interest, prejudices, and most certain, his activities.

e. Robert E. Park and Ernest W. Burgess:[3]

According to Park and Burgess, attitudes are not instincts, nor appetites, nor habits, for these refer to

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1 Fundamentals of Social Psychology, pp. 45-47.
2 Social Progress, pp. 105-130.
3 Introduction to the Science of Sociology, pp. 435-443.

specific tendencies to act that condition attitudes, but do not define them. Attitudes are not the same as emotions or sentiments, although attitudes are always emotionally toned and frequently supported by sentiments. Park and Burgess emphasize that instincts, appetites, habits, emotions, sentiments, opinions, and wishes are involved in attitudes; and that attitudes are mobilizations and organizations of the wishes with reference to definite situations. They conclude by saying that the clearest way to think of attitudes is a behavior pattern or unit of behavior.

f. Wolfgang Kohler:[1]

The Gestaltists make frequent use of "attitude", yet the closest Kohler comes to a definition is when he says that "a change of attitude involves a definite psychological stress exerted upon a sensory field by processes originating in other parts of the nervous system." Attitudes are directed toward or away from objects. He speaks of analytical, emotional, indifferent, dynamical, and introspective attitudes. It is difficult for Kohler to understand how a direct attitude depends upon a definite physiological situation of the organism as in the case in hunger or sex, but he thinks it does.

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1 Gestalt Psychology, pp. 184-268.

Kohler has made a very interesting analysis of the nature of communication in its more direct and elementary forms where one does not so much observe behavior and interpret it, as perceive the mind through the medium of overt acts. Overt actions because they are so instrumental and secondary to the "perception of the attitude", are themselves either perceived but slightly or not at all.

Park[1] offers this illustration in connection with communication. Animals, with whom communication is naturally of a very elementary sort, offers the best illustration of the subtlety and immediacy with which attitudes expressed in very slight movements, are communicated; that is to say, suggest the purposes or intent of one individual to the mind of another, under circumstances where a gesture, if regarded as something more than a signal for a specific act, would probably be meaningless.

g. Ellsworth Faris:[2]

Faris has summarized his views on attitude in rather a recent article when he says "that an attitude is in part the residual effect of the act, but it remains as a predisposition to certain forms of subsequent activity." The motive or intention is an integral part of the act, and no estimate of the quality of

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1 Park, Robert "Human Nature, Attitudes and The Mores", Social Attitudes, p. 33. edited by Kimball Young

the act can be made without considering the inner experience. Objects or values also occur as the result of action and are correlates of attitudes. In conclusion, Faris says that "attitudes exist as tendencies to act which are subjective".

h. W. I. Thomas and F. Znaniecki[1]:

Thomas and Znaniecki used two correlative terms, value and attitude, to describe the meaning of attitude. By value they meant "any datum having empirical content accessible to the members of some social group, and a meaning with regard to which it is or may be an object of activity." By attitude they meant " a process of individual consciousness which determines real or possible activity of the individual in the social world". The attitude is thus the counterpart of the social value; activity in whatever form, is the bond between them.

i. L. L. Bernard[2]:

For Bernard an attitude is essentially an incomplete or potential adjustment behavior process. It is the set of the organism toward the object or situation to which an adjustment is called for. When the adjustment is made the attitude disappears, except in so far as it is retained in memory or in the habitual set of the organism.

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1 The Polish Peasant in Europe and America, Vol. I, pp. 21-22.
2 Introduction to Social Psychology, pp. 246-248.

Attitudes arise only in an adjustment situation and they may be regarded primarily as preparation for the adjustment which is in its initial stages and is to be completed. Attitudes serve as conditioning stimuli as well as conditioned responses, and vice versa. In their simplest form they are symbolized overtly merely by emotional expressions and rudimentary gesture and vocal language. But in their more developed forms they constitute our conscious desires, valuations, and ideals.

j. John Dewey:[1]

Dewey identifies attitude as synonymous with habit and disposition. He further states that attitudes suggest something latent, potential, something which requires a positive stimulus outside themselves to become active. Attitude is the "subdued, non-potent" form of habit resulting from an inhibitory tendency.

k. L. L. Thurstone and E. J. Chave:[2]

In the study of attitudes made by Thurstone and Chave, they use two terms "attitudes and opinions". The concept attitude is used to denote the sum total of a man's "inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic. Thus, a man's attitude about pacifism means all he feels and thinks about war."

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1 Human Nature and Conduct, p. 41.
2 Measurement of Attitude, pp. 6 and 7.

The concept opinion means a "verbal expression of attitude. If a man said that we made a mistake in entering the war against Germany, that statement would be called his opinion. An opinion symbolizes an attitude".[1]

1. Read Bain:

Bain holds that an attitude is the relatively stable overt action of a person which affects his status in groups. There is an habitual element in Bain's idea which includes a social habit, value habit, and status fixing habit. Bain offers this illustration to make his point. "Putting on my left shoe first is habit, and behaviour pattern, but it is not an attitude. Wearing shoes to banquets, however, is an attitude, because that affects my status. It is immaterial to the scientist what so-called 'subjective' motives or wishes or desires induce people to wear shoes to banquets. It may be pride in small feet, or to please wives, or to keep feet dry, or what not. The scientist is concerned only with the fact that they do it. For him, whatever the subjective states may be, the attitudes are the same when behavior is the same. The subjective motives are no more a part of his concern than the hypothetical consciousness, desires, and wishes of an atom are concerns of the physicist. It is needless to say that a man

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1 "An Attitude on Attitude Research", American Journal of Sociology, Vol. 33, p. 951.

who regularly goes barefooted to banquets also exhibits an an attitude because such behavior affects his status."

Bain states very clearly that he has included the word "overt" in his definition to emphasize the fact than an attitude designates the total response of a person to a total situation. He says: "Since thinking and verbation are forms of physical action, and may be important in fixing status, we might properly speak of verbal attitudes. But in opinion we already have a good term for these partial responses; and since verbation does not always pass over into overt action, attitude should be reserved for the total status-fixing responses of a person."

3. Summary.

From this review of the various conceptions of attitude, we discover that the problem of defining attitude is not an easy one. To clarify and to integrate these different points of view, it becomes necessary to summarize the various conceptions of attitude. Many essential points are expressed by these authorities which must be considered before an attempt is made at a final definition.

First of all attitude is defined as synonymous with habit. Dewey,[1] Hertzler,[2] Watson,[3] Symonds,[4] and Warren[5] are the

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1 Dewey, John Human Nature and Conduct, p. 41.
2 Hertzler, Joyce Social Progress, p. 105.
3 Watson, J. B. Behaviorism, p. 196.
4 Symonds, P. M. Social Attitudes Questionnaire, p. 316.
5 Warren, H. C. Elements of Human Psychology, p. 333.

main exponents of this point of view. Symonds states the phrase "habits and skills" should be substituted for the term attitude. Watson brings out the fact that"an attitude is a combination of emotional, instinctive, and habit activities"; and Warren expresses almost the same point of view when he says that attitude is the result of repeated experience, that is, "motor posture plus mental condition, which governs motor posture".

As Bain says, with this use of attitudes as habits, "it is usually complicated by references to some hypothetical instinctive, mental, emotional, or feeling concomitant, latent, inhibited, or active in the response".[1]

Therefore to regard attitude as habit, it means everything that human beings do and means nothing definite in the way of describing an attitude.

Another common usage of attitude which is somewhat related to habit, is the identification of attitude with motor and mental sets, and readiness to adjust.

These views are held by Allport,[2] Bogardus,[3] Bernard,[4] Jung,[5] Kohler,[6] and Young.[7] Bain[8] can be included in this group

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1 Bain, R. "An Attitude on Attitude Research", p. 943.
2 Allport, F. A. Social Psychology, p. 244.
3 Bogardus, E. S. Fundamentals of Social Psychology, p. 45.
4 Bernard, L. L. Introduction to Social Psychology, p. 246.
5 Jung, C. Psychological Types, p. 526.
6 Kohler, W. Gestalt Psychology. p. 184.
7 Young, Kimball Social Psychology, p. 137.
8 Bain, R. "An Attitude on Attitude Research", p. 944.

because, defining of attitude as a motor set, minimizes the subjective element, and deduces attitudes from performance. Bernard's view is in essential agreement with the behavioristic approach set forth in this discussion, yet he made it very clear that attitudes are actions, and not mental or emotional states.

One of the most common uses of attitude is its identification with opinion as revealed by verbal responses. Almost all of the research workers take this point of view. The exponents of this approach are Thurstone and Chave,[1] K. M. Cowdrey,[2] J. Davis,[3] G. A. Lundberg,[4] R. Bain,[5] F. H. Allport,[6] W. W. Clark,[7] P. M. Symonds,[8] and others. It should be said here that while Bain and Symonds have done their experimental work on attitudes, by the use of verbal responses, they are opposed to the use of attitudes as opinion. Bain stresses the "overt action of the individual", and Symonds emphasizes the use of "habits and skills" instead of attitudes.

W. I. Thomas was one of the first social psychologists who attempted to define attitude in a non-normative, objective manner so that it could be used as a tool for scientific research. Attitudes began to play a large part in educational literature

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1 The Measurement of Attitudes, p. 6.
2 "Measurement of Professional Attitudes", Journal of Person. Res. p.131
3 "Social Attitudes of Children in Government Schools in Russia", American Journal of Sociology, p. 948. May 1927.
4 "Sex Differences on Social Questions," School and Society, May 1926
5 "Religious Attitudes of College Students", Am. Jr. of Sociology, March 1927, p. 762.
6 "Measurement and Motivation of Atypical Opinion", Am. Pol. Sc. Rev. Vol. 19, p. 735.
7 "Measurement of Social Attitudes", Jr. of App. Sociol, Vol.8, p.345
8 "A Social Attitudes Questionnaire", Jr. of Ed. Psych, 1925, p. 316.

after the appearance of The Polish Peasant in America. Thomas' view on attitudes is summarized very well by Bain, who says, "Thomas' attitude is the subjective reaction to a value."[1]

Thomas' idea of attitude has been somewhat modified and elaborated by his followers, although none of them have clearly broken with his subjectivistic point of view. None of them have dispensed with the "tendency and impulse to act". They have conceived attitudes as a combination of wishes, impulses, sentiments, and as Bain says "other hypothetical mental, emotional entities".[2]

For example Park and Burgess say, "the wishes enter into attitudes as components",[3] and they state that the wish for recognition may be expressed as boasting or humility. They say that the "wish is the same, but the attitudes are different."[4]

It would seem to follow that attitudes also enter into the wish as components. The wish gives rise to various attitudes, and yet an attitude is made up of wishes. Thus it becomes impossible to tell what is wish and what is attitude, as it is rather impossible to differentiate the

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1 Bain, R. "An Attitude on Attitude Research" Amer. Journal of Sociology, Vol. 33, p. 946.
2 Ibid, p. 949.
3 Introduction to the Science of Sociology, p. 438.
4 "Attitudes and Behavior", American Journal of Sociology, Vol. 34, p. 274.

attitude of a group from a value.

Faris[1] holds that the attitude is the result largely of crisis situations while the wish is the precursor of action. Thus Bernard's "attitude" is Faris' "wish"; while Holt's[2] "wish", says Bain, "is more like Sémon's 'engram', or Pareto's 'residue'."[3]

P. M. Symonds strikes one of the keynotes as to the classification, and grouping of the various conceptions of attitudes when he says "that attitudes are used in seven different ways: (1) great organic drives, purposes, and motives; (2) muscular adjustment; (3) generalized conduct; (4) a neural set or readiness to adjust; (5) emotional concomitant of action; (6) feeling concomitant of action; (7) accepting or rejecting verbal responses."[4] His own use of the term "attitude" is always referred to as "habit or skill". More discussion of these various conceptions will be presented in the next section of this chapter.

Bain attempts to summarize and to integrate the various conceptions of attitudes in his recent article published in The Psychological Bulletin. He says, "the tendency to act, positive or negative, of Thomas and his followers, Park and Burgess, Faris, Bogardus, seems to be quite similar to motor and neural set, or readiness to adjust. This perhaps the most prevalent use of

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1 "Attitudes and Behavior", American Journal ofSociology, Vol.34,p.274.
2 Holt, E. B. The Freudian Wish and Its Place in Ethics, p. 3-4.
3 Bain, R. "Theory and Measurement of Attitudes and Opinions", Psychological Bulletin, Vol. 27, 1930, p. 357.
4 Symonds, P. M. The Nature of Conduct, pp. 225-237.

attitudes among sociologists, although we should add the preparatory movement of partial adjustment idea of Bernard's, that is, emotional expressions; the relatively stable overt status getting response of Bain; and the sharp criticism of all the above by Markey[1] with his conclusion that attitudes are behavior integrations associated with signs and symbols of probable behavior."[2]

The following chart presents the writer's interpretation of the different concepts of attitudes by the leading authorities of attitude study.

It is to be observed that the most frequent uses of attitude, according to these authorities, are mental sets, opinions, motor sets, habits, verbal responses, and feelings. Thirty-four different descriptions of attitudes have been given by the twenty-eight authorities.

It is also to be noticed that the problem of definition is not an easy task because of the variety of opinion in regards to a specific statement or definition of attitude. Each authority has used from one to eleven concepts, or terms, in describing the meaning of attitude.

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1 Markey, J. F. Trends in American Sociology, p. 126 (Bain's authority)

2 Bain, Read "Theory and Measurement of Attitudes and Opinions", Psychological Bulletin, Vol. 27, p. 358.

AUTHORITY \ CONCEPT	HABITS	MENTAL SET	MOTOR SET	SKILLS	OVERT ACTION	TENDENCY TO ACT	GENERALIZED CONDUCT	BEHAVIOR PATTERNS	READINESS	OPINIONS	VERBAL RESPONSE	IDEAS	BIAS	PREJUDICE	CONVICTIONS	PREDISPOSITIONS	PRECONCEIVED NOTIONS	MOTIVES - DRIVES	INSTINCTIVE	FEARS	THREATS	FEELINGS	EMOTIONS	SENTIMENTS	WISHES	DESIRES	DISPOSITION	VOLITIONAL	TEMPERAMENT	INCLINATIONS	IDEALS	VALUES	INTERESTS	LIKES - DISLIKES
ALLPORT. F.H.		•	•				•			•	•																							
BAGLEY, W.C.	•	•	•																															
BAIN. R.		•	•	•	•					•																								
BERNARD. L.L.		•	•					•																		•	•							
BOGARDUS E.S.		•	•			•													•			•	•					•		•	•			
BURGESS. E.W.								•		•									•					•	•									
CHARTERS. W.W.		•										•																						
CHAVE. E.J.										•	•	•	•	•	•		•			•	•	•								•				
COWDREY, K.M										•	•																							
DAVIS. J.										•	•																							
DEWEY J.	•				•																													
FARIS. E					•											•								•								•		
HART. H	•									•														•										
HARTSHORNE-MAY		•	•				•			•																								
HERTZLER J.D.	•				•									•				•					•										•	
JUNG. C.		•	•						•			•																						
KOHLER. W.		•																																
LUNDBERG. G.										•	•																							
McDOUGALL. W.		•							•										•			•	•											
PARK. R.E.								•		•									•					•	•									
SHAND. A.																								•			•							
SYMONDS. P.M.	•			•							•																							
THOMAS. W.I						•																										•		
THURSTONE. L.L.										•	•	•	•	•	•		•			•	•	•								•				
VOELKER. P.		•	•		•																	•											•	
WARREN. H.C.	•	•	•																•			•	•	•	•								•	
WATSON J. B.	•	•																	•			•	•											
YOUNG. K		•	•		•																													

B. The Psychological Nature of Attitudes.

1. Attitudes as Sets and Adjustments; and Generalized Conduct.

Attitudes can be classified as muscular, or bodily or organic; and also as mental, or neuro-psychic. In other words we can call them muscular sets and neural sets. There is no absolute division between neuro-muscular or bodily attitudes, and neuro-psychic or mental attitudes. It is hard to draw a sharp line of demarcation between these two ideas, but it is safe to say that there are distinctions at the border zones and at the extreme poles of attitudinal behavior.

Muscular tension and hyper activity of the glands, with more or less of an emotional accompaniment, is characteristic of suspended or interrupted bodily action, just as relatively complete collapse of muscular tensions and suspensions of glandular activity with emotional listlessness or depression may accompany long interrupted, or suspended or disorganized overt adjustment behavior. Likewise, a reintegration of behavior patterns, with reference to a new or modified environmental objective, or upon the release of the old inhibitions, is marked by a heightening of muscular tensions and an increased glandular activity and heightened emotion, preparatory to the release of the behavior patterns into overt behavior.

a. Muscular Adjustment.

The muscular or bodily attitudes are familiar to us through observation and experience. We know what it is to take an attitude of defense against a blow, or against the crowding subway mobs; or to have an attitude of assistance or of readiness to grasp an object. Bernard says that "the muscular tensions which develop in a situation of readiness for play, fighting, or vocational behavior are among the strongest of our kinesthetic sensory experiences."[1]

(1) Examples from daily life.

Instances of muscular set, or postural activity are to be observed on every hand. The sprinter on his mark shows it in an extreme degree as he awaits the signal of the pistol shot.

Symonds[2] offers a very good illustration of this point. The commands of the starter proceed. At the first command, the runner takes his position, he crouches, he places correctly his feet and his hands. At the second command he rises, still on all fours, into a position of tenseness - all muscles are stiffened, and the eyes are set forward. Changes take place in the circulatory, respiratory, and glandular systems. With a given organic urge these bodily and organic reactions are the first reactions that are made

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1 Bernard, L. L. Introduction to Social Psychology, p. 246.
2 Symonds, P. M. Nature of Conduct, p.

in attempting to diminish or satisfy the urge, because they are a kind of preliminary adjustment in which the organic probably dominates.

The skillful open field runner on the football field counts the phenomenon of set on the part of the tackler. He runs as if to pass directly within the latter's clutches and then at a properly judged instant abruptly alters his course or momentarily arrests his progress; and the tackler, caught unprepared for this new situation, lunges ignominiously and harmlessly out of the way.

(2) Examples from the experimental laboratory.

The experimental laboratory gives some fine examples of muscular adjustment. The phenomenon of attitude may be said to have become well recognized by scientists first in connection with experiments on lifted weights and reaction times. Professor Dashiell[1] of the University of North Carolina gives a very good experiment illustrating this point.

In an experiment of lifting weights the subject is presented two canisters or blocks of identical size and shape, but of slightly different weights, and is instructed to "heft" each in turn once only with the same hand (vision being excluded)

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1 Dashiell, J. B. Fundamentals of Objective Psychology, p. 276.

and to make a verbal reaction by saying whether the second is heavier or lighter than the first.

What occurs in this judging is - in the process of lifting the first weight - the setting up of a motor adjustment, a tendency to expend the same amount of force on a second lifting. Then when the second weight is lifted, it is said to be heavier or lighter according as it yields with difficulty or with ease to this particular expenditure of energy; the kinesthetic afferent impulses resulting from the movement, and its resistance being the cues serving as stimuli to the vocal habits of saying "heavier" or "lighter". Discrimination of lifted weights is thus guided by a previous setting or adjusting the "hefting" process.

The word-association experiment is another laboratory example for illustrating "mental set or adjustment", because the importance of the previously established set of the subject is one of the most outstanding features of that work.

The "control" of the controlled association tests consist essentially of some device whereby the subject is stimulated to set up a certain attitude determining his word responses in a certain direction. Previously instructed to react with nouns only, let us say, or with names of articles of food only, or with opposites only, the subject's word responses are accordingly

selected or circumscribed in character. Under some controls as in the case of opposites, his reactions may actually be quicker than when uncontrolled or free.

(3) Conclusions regarding these examples.

In the foregoing technical and non-technical examples of attitudinal responses, two characteristic features may be discerned. One is brought out in the use of the German term die Einstellung suggested by Dashiell[1] and Jung,[2] which means that "every continued activity arouses in the organism a tendency to persist in the same general type of activity, and a difficulty in changing over to very different activities."[3]

Max Meyer[4] has been calling attention to the same feature in his use of the term "preoccupation". He offers the example of a student who has difficulty in getting into a lesson that is to be studied, and must go through a "warming up" stage; but who, once he is well set, can work smoothly and in concentrated fashion. Let a roommate come into the room and the student's answers to him will take the form of monosyllables and grunts. But if the roommate is not so easily ignored and continues the conversation, the student's participation therein becomes more complete, that is, he becomes more alert to the conversation. When the roommate leaves, and the lesson is again to be attacked, it is all too likely that

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1 Dashiell, J. F. Fundamentals of Objective Psychology, p. 280.
2 Jung, Carl Psychological Types, p. 527.
3 Dashiell, J. F. Ibid, p. 280.
4 Meyer, Max Abnormal Psychology, p. 106.

"the warming up" process must be gone through all over again.

Another phase of the phenomenon of muscular adjustment or postural set is observed when in response to a new stimuli a new posture is established and this in turn determines the character of the activities that follow.

Consider Peterson's[1] investigation of the effect of attitude upon remembering. Before psychology classes, a list of twenty words was written upon the blackboard and the students were instructed to copy it on the left margin of sheets of paper. The list was read over alone to check it. Then the students were told to turn over the sheet and reproduce all the words of the list so far as possible. Before the same classes, another list was similarly written out to be copied down by them, but now with the additional instructions that a reproduction was going to be called for.

The data secured showed that, both for reproducing immediately after, and for reproducing after an interval of forty-eight hours, the learning accompanied by instructions concerning a later reproduction was distinctly more effective than learning without such instructions. The behavior toward the stimuli was then, as much a function or result of the attitude

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1 Peterson, J. "Effect of Attitude on Immediate and Delayed Reproduction", Journal of Educational Psychology, Vol. 7, 1916, pp. 523-532.

set up by instructions, as it was of the stimuli themselves and of the previously built up habits of response thereto.

(4) Attitude as Attention.

Assuming an attitude of attention brings about muscular and postural adjustment. Dashiell says "When a person takes up an attitude that will facilitate his response to some particular stimulus or stimuli, that attitude goes by the name of attention."[1]

For example, consider the military command, "Attention!" What is aroused on the soldier's part is a certain stance, a fixed position of arms and hands, a poise of head, even a certain direction of the eyeballs; all of this posturing is designed to render the soldier more sensitive to the next commands heard, and more prompt in their execution and by the same symbol, less sensitive and reaction to other stimuli; whether extra or extra organic.[2]

The dog at the rat hole displays an eager posturing, so intensified often, that the hypertonicity of muscles passes over into visible trembling; the whole attitude of a qui vive rendering the dog ready in maximal degree to sense the victim and to pounce upon it.

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1 Dashiel, J. F. Fundamentals of Objective Psychology, p. 285.
2 Illustration from Dashiel, p. 285-286.

b. Neural Adjustment and Readiness:

Mental attitudes appear to begin in the emotional accompaniments of the neuro-muscular attitudes and are quite vague and diffused from an intellectual standpoint at this stage of development.

(1) Neuro-muscular organization:

Muscular and glandular responses have their neural phases and are coordinated by the neural organization. In lower animals the relative simplicity of the neural centers prevents any very complex and delayed neural adjustment from taking place before overt muscular response again occurs. But among higher animals, more and more of the work of readjusting the attitudes preparatory to the final redirected overt response is performed by the neural centers.

In the average human being perhaps most of this readjustment work is done there and if the person has had intellectual training, that is, has been taught to think before he acts, possibly nearly all readjustments of attitudes takes place in the neurons rather than in the muscles. This does not mean that the neurons act without the muscles.

It may be doubted whether even in the most highly developed thought the neurons act without some muscular and

glandular response. But as the animal type rises higher in the scale as measured by neural equipment, and as the organism learns, or is trained, to delay its responses when they have been interrupted before repeating the old muscular responses, or substituting new ones at random, there is this tendency to push back the reorganization of substitute responses from the muscles to the neural centers.

It is possible that certain types of attitudinal behavior have their proper explanation in terms of snyaptic connections of the neural arcs involved, rather than in terms of characteristics of the effectors.

The determining effect of set may be reducible to the principles of facilitation and inhibition between reflex arcs. When one stimulus or situation arouses a certain neural excitement leading to a reaction, this neural excitement will be spread into other arcs tending to reenforce the activity of some and to inhibit the activity of others; and a laterstimulus tending to arouse one of the facilitated arcs will become effective, whereas the stimuli tending to arouse inhibited arcs will be ineffective.

(2) Analysis of Set or Readiness:

Symonds gives a rather complete analysis of what is meant by the use of set or readiness of attitudes, when he

says, "It can be traced back to the metabolic state of all the neurones involved in responding to a certain situation. At a given moment, as a result of learning, and the state of fatigue or rest, every neurone has a certain electrochemical state which defines its readiness to react under a given stimulus. This state of readiness is what is often referred to as attitude."[1]

He goes on to say that "this readiness (excluding metabolic state due to rest or fatigue) is nothing except the net result of part learning, and exhibits itself under stimulation in a response which is described as a habit of more or less strength."[2] In other words, attitude here refers to that static condition of the neurones which precedes and determines the nature of the dynamic response under stimulation. Symonds continues to say:

> "That the static condition and the dynamic response are complementary and exhibit a perfect correlation. Our knowledge of the static condition or readiness, or attitude can only be determined by noting the response under appropriate stimulus. Furthermore these sets, or readinesses, or attitudes are also complementary to feelings of value which are so highly considered as being the foundations of character."3

The protoplasm of the neurons seems to be more sensitive than that of the other bodily tissues, and this fact, together

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1 Symonds, P. M. Nature of Conduct, p. 227.
2 Ibid, p. 227.
3 Ibid, p. 227.

with the denser organization and closer concentration of the neurones in vast numbers in the cerebral cortex gives rise to consciousness.

(3) Significance of Mental Attitudes:

It is easy to see why mental attitudes have greater significance for the adjustment or readjustment of the behavior processes than have the overt or bodily attitudes. Hence the great amount of experimental work of the research worker to produce methods and techniques to measure attitudes of this type. It is on the mental or higher neuro-psychic level of attitudinal reorganization, that the socially most significant, most complex, most far reaching and far seeing redirections of behavior occur.

c. Attitude as Generalized Conduct.

Attitude sometimes refers to generalized conduct; that is, to conduct in response to abstract and minute features common to many different situations. The conduct which is most vital to society is that of the regularity and uniformity of our responses, and the way in which we react in situations bearing certain characteristics. For example, in situations involving honesty, truthfulness, generosity, courage, loyalty, and kindliness, our attitudes are manifested, and furthermore,

our attitudes may determine our reactions to these situations.

For instance, Hartshorne and May say "that attitudes toward cheating, as measured by the resistance that will be overcome in order to cheat, are probably just as specific as cheating itself."[1] They continue to state that according to the past experiences, the individual may be more or less permanently predisposed to make an honest or dishonest response in situations involving this type of conduct. For instance, here is a man faced with a mass of figures representing his income for the year. He is to make out his income tax report. Now if his neural mechanism is set or predisposed to facing the facts, regardless of cost or consequence, he will be more likely to make an honest return, than he would be if his neurones were set in the direction of shading the truth, or doctoring the figures so that the result will be favorable to himself. It must be kept in mind, however, that his behavior is not totally determined by his attitudes, but that his past experiences, and urges or drives may operate to influence his conduct reaction.

Hartshorne and May then built up a scale to measure the attitudes involved in a cheating situation. Their problem was this:

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1 Hartshorne, Hugh, May, Mark Studies in Deceit, Book II, p. 221.

"Assume that by the time a child reaches the fifth grade he has more or less permanent sets or attitudes toward cheating in school work."[1] That is he may be set aginst it, or be in favor of it, or be neutral toward it.

The situation was so arranged that it was clear to the child that nothing could be gained or lost by cheating, and that if he cheated, no one would know it, and if he was honest, no one would know it. It was assumed then that those who cheated under these conditions had a tendency toward it, and that those who did not cheat had a tendency against it, or else they were neutral.

Now the importance of attitudes in generalized conduct is just this: if a person's conduct is consistent, in one or more of these situations, one can tell what he will do relatively accurately in specific situations. A knowledge that a man's character is high is of great importance in employing a bank teller, for it would be as good a guarantee as could be obtained that a person is dependable and tends to be more consistently honest, thorough, accurate, and the like in most situations in which he finds himself, than an average man.

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1 Hartshorne and May, Studies in Deceit, Book II, p. 222.

2. Attitudes as Values.

Attitudes do not exist without reference to value meanings; and meanings are related to situations of all sorts around which we have constructed our habits and built up a series of images. Value represents, as Znaniecki puts it, the counterpart of attitude. Attitudes are not developed *in vacuo*, but always in reference to something in the environment. These relations of organism to situations constitute the world of meaning.

a. Thomas' value-attitude idea.

W. I. Thomas who was the first to popularize attitudes in sociological literature describes an attitude as "the state of mind of the individual toward a value", and adds by the way of illustration, "love of money, desire for fame, appreciation for God, and hatred to the Jew are attitudes". It follows that money, fame, God, and the Jews are values.

In order to have a thorough knowledge of the relatedness between attitudes and values, let us examine the source material which Thomas and Faris set forth.

> "By a social value, we understand any datum having an empirical content accessible to the members of some social group and a meaning with regard to which it is, or may be an object of activity. Thus, a food stuff, an instrument, a coin, a piece

> "poetry whose content is constituted, not only by the written or spoken words, but also by the images which they evoke, and in the case of the university, whose content is the whole complex of men, buildings, material accessories, and images representing its activity, or, finally, only imaginary in the case of a mythical personality or a scientific theory. The meaning of these values becomes explicit when we take them in connection with human actions. The meaning of the food stuff is its reference to its eventual consumption; that of an instrument, its reference to the work for which it is designed; that of a coin, the possibilities of buying and selling or the pleasures of spending which it involves; that of a piece of poetry, the sentimental and intellectual reactions which it arouses; that of the university, the social activities which it performs; that of the mythical personality the cult of which it is an object, and the actions of which it is supposed to be the author; that of the scientific theory, the possibilities of control of experience by idea or action that it permits. The social value is thus opposed to the natural thing which has a content, but, as a part of nature has no meaning for human activity is treated as "valueless"; when the natural thing assumes a meaning, it becomes thereby a social value. And naturally a social value may have many meanings, for it may refer to many different kinds of activity."1

b. Faris' value-attitude idea.

In brief the field of social value is the field of meaning, and attitudes are the "incipient responses" in regard to these values. Ellsworth Faris describes his view of attitudes and values in the following terms:

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1 Thomas, W. I. and Znaniecki, F. "The Polish and Peasant in Europe and America", Int. Ed.,1927, Vol. I, pp.20-21.

> "The nature of attitudes will be clearer if we consider them in relation to the objects and the emotionally toned objects which are appropriately called values. It must be observed, however, that objects belong to experience, not necessarily to nature. Psychology is not concerned with what the object is but with what it is experienced as. For we live in a world of cultural reality and the whole furniture of earth, and chair of heaven are to be described and discussed as they are conceived by men. Caviar is not a delicacy to the general. Cows are not food to the Hindu. Mohammed is not the prophet of God to me. To an atheist God is not a God at all. Objects are not passively received or automatically reacted to; rather is it true that objects are the result of a successful attempt to organize experience, and the externalized aspect of the organization is the object or value; the internal or subjective tendency toward it is the attitude. Let it be said again, the name by which this aspect of human nature is referred to is absolutely irrelevant. The essential point is that tendency, predisposition, organized inclination is centrally important, and that corresponding to this aspect of the experience of the person there is an externalized object of the tendency to which men give the name object or value."1

c. Summary and Conclusions.

The relation of attitudes to values is important, therefore, it is necessary that we inquire into the genesis of attitudes. Thomas' work has influenced most of the writers on attitudes. To him the cause of an attitude was never another attitude but always depended on another attitude and a "value"

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1 Faris, E. "Attitudes and Behavior", American Journal of Sociology., Vol. 34, pp. 278.

which was the term he preferred for the objective existences in the world. The series is typically for him: attitude - value - attitude, or value - attitude - value.

> "Thus, if we have as a starting point an attitude a and as a result an attitude m the evolution may have gone on in such a way that out of a, under the influence of value B, is evoked the attitude d; under the influence of J, the attitude k and k, under the influence of a value N, was changed into the attitude m. But it might have happened also that a was influenced not by B, but by C, and the result was a different attitude e, which again under the influence not of F, but of G, gave i and i, when influenced by L, also produced m. And the same can be said of values."[1]

Faris criticises the utility of this scheme, because, depending as it does on the separation of attitudes and values, or objects, and linking them together in a causal series seems to prove disappointing in experience, when an effort is made to discover the genesis of any particular attitude in any particular person or group.

"In the first place", says Faris, "the sequence is not convincingly apparent. The attitude and the value, or object seem to exist always as two aspects of a single unity of organization."[2]

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1 Thomas, W. I. "The Polish Peasant in Europe and America", 2nd edition, 1927, pp. 1839-1840.

2 Faris, E. "The Concept of Social Attitudes", in Social Attitudes, edited by Kimball Young, p. 9.

The example Faris[1] gives to make this point is this. If a man confesses to a prejudice against the negro race there is to be distinguished an attitude (of prejudice, hostility, withdrawal) toward an object which is the Negro race. The object or value is as much a part of the individual experience as the attitude. It is, in effect, the externalization of the attitude just as the attitude is the subjective counterpart of the object. For there seems to be the necessity of recognizing that objects or values are not the same to two people who have different attitudes. The church is not the same object to one who hates it as to one who loves it. The flag is not the same to the devoted patriot as to the conspiring traitor. The value and the attitude are two aspects of the same experience.

From this discussion of Faris' it seems that one cannot experience a new object without experiencing at the same time a new attitude. The object is that toward which the attitude is directed. The attitude is the tendency toward a mode of response, toward the object in question.

Attitudes and values are linked together in a very definite set of patterns, the former representing the habitual reaction tendencies, the latter the objects or situations toward which these tendencies are directed. But the relation of value and

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1 Faris, Ellsworth "The Concept of Social Attitudes," p. 10

attitude is not always understood.

Attitudes and values are built up unconsciously in so many instances, that we are at a loss to understand their significance. When confronted with the demand of our fellows, or ourselves, to explain our conduct, we are more or less habitually forced to seek out some conscious motive for our behavior.

3. Attitudes as Organic Drives.

An attitude may be one of the great organic drives. Used in this way attitude refers to some more or less permanent set or adjustment of the individual leading to some line of activity. Organic drives, or urges, provide a rich source of attitudes. The fundamental needs of human life predispose individuals toward certain lines of thought, feeling, and action. General attitudes of competition, curiosity, humanity, and similar states often are traceable directly to such native tendencies or urges, as modified by experience. The attitude toward particular objects is in terms of the use to which they may be put in satisfying basic hungers.

Although there is much disagreement as to exactly what tendencies or drives are native, and also the exact differentiation of these drives, a few of the more significant

ones are here noted. All of them are apparently common to the human race.

a. The Gregarious Attitude.

By this term is meant the desire and the impulse to associate with others. We feel more comfortable under most circumstances when we are with companions; rarely does one choose to live in entire isolation. There are feelings of satisfaction when one is associated with a group while feelings of uneasiness may occur when one is isolated from the group.

Bogardus says: "that this gregarious attitude is an outgrowth of the herd instinct of animals."[1] It is largely feeling and is expressed in the crowd spirit, in cliquishness, race and class prejudices.

Bogardus goes on to say that the gregarious attitude, or impulse, possesses a definite survival value inasmuch as it keeps individuals together and furnishes a basis for cooperative effort. Under primitive social conditions where the "herd" is more vital than any other form of grouping, gregariousness is basic. Out of this, attitudes of loyalty and patriotism have sprung. Gregariousness underlies all fraternal relations between persons.

Therefore, out of the gregarious impulse or drive to be associated with individuals, groups, or organizations and

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[1] Bogardus, Emory S. Fundamentals of Social Psychology, p. 48.

institutions, there arises certain mental sets, or attitudes, which in turn become characteristic fixations of these groups. Attitudes of loyalty, patriotism, love, hate, antagonism, and cooperation may be the distinctive forces of the gregarious impulse.

b. The Sex Attitude.

The sex attitude arises from the complementary nature of the sexes, physically, mentally, and socially. The sex attitude is in reality a complex of many urges. In its fully developed forms it involves most other urges such as gregariousness, desire for approval, rivalry, and competition, kindliness and sympathy, curiosity, and acquisitiveness. The sex attitude leads to such extremes as commercialized vice and the purest types of love and chastity. The widespread use of hotels and apartment houses by "mistresses" who are supported by men; and the congregating of prostitutes around army cantonments are symptoms of the level to which the sex attitude may fall. The sublimation of the sex urge into monogamic, conjugal love and parental attitude testifies to the heights to which the sex attitude may attain.

c. The Parental Attitude.

Bogardus says that "a little child is generally rated as the chief social value known to mankind."[1] The presence and

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[1] Bogardus, E. Fundamentals of Social Psychology, p. 48.

needs of the child create new relationships between the husband and wife and set up the parental attitude with all its self-sacrificing implications. Parents and children constitute society's most important institution, and the parental attitude is of primary significance.

The parental attitude, involved in the urge to care for, and to protect valiantly their offspring, is strikingly apparent in many animals as well as human parents. Arthur Gates of Columbia University says that "parental attitudes or urges of mothers, human or animal, seem especially responsive for a time after birth, perhaps as a result of their organic condition."[1]

d. The Inquisitive Attitude.

The inquisitive attitude is recognized as a basic tendency arising largely through the individual's readiness to perceive, coupled with physical activity, notably manipulation. This view is set forth in West and Skinner's new book.[2]

The curiosity of young children is well known, not only in the asking of questions, but also in their tendency to investigate any object coming within their field of observation.

The inquisitive attitude is built up by environmental factors that are somewhat, but not wholly, different from past experience. Its highest expression is in the scientific attitude.

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11 Gates, A. I. Psychology for Students of Education, p. 200.
2 West, Paul V., and Skinner, Charles E. Psychology for Religious and Social Workers, p. 106.

Bogardus[1] says that gossip illustrates inquisitiveness in its simplest, least intelligent, and yet dynamic forms; while scholarship shows its powerful motivating character in the highest realms of reasoning and research.

e. The Acquisitive Attitude.

This inclination of ownership exists in all of us in various degrees. The acquisitive attitude is manifested very early in life. Childhood and adolescence abound with expressions of the impulse to make collections of stamps, butterflies, dolls, marbles, and trinkets of all sorts. This tendency continues through maturity; and to it there may be traced some of the world's finest libraries and art galleries, as well as acquisitions of land. So strong and persistent is the acquisitive attitude, that men continue to accumulate riches long after they have acquired enough property for the needs of themselves and their children.

The tendency to accumulate goods is very pervasive in our modern complex society, often interfering with the real business of living. Wealth is power and thus tendencies to self assertion and mastery naturally act as incentives to its accumulation. Attitudes of rivalry and competition are

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1 Bogardus, E. S. Fundamentals of Social Psychology, pp. 52-53.

employed in this process. Attitudes of kindness and sympathy are often lost sight of in the zest of such undertakings.

f. The Combative Attitude.

The combative attitude develops in and through reactions against obstacles which hinder the impulses, habits, desire, or other tendencies. This combative attitude is conceived as a means to some end, or the attainment of satisfaction for some other urge.

It is maintained by some authorities that the combative attitude is used to secure mastery, or social approval; or, under primitive conditions, to secure food, shelter, mates, or some other reward.

The combative attitude is a basic psychic factor in business competition, political compaigning, social reform and also courtship under competititve circumstances. Bogardus says that the combative attitude "is a dynamo which engenders tremendous forces in intellectual realms."[1]

g. The Social Approval Attitude.

The desires and attitudes to secure social approval goes beyond the mere satisfaction of being in a group. The approving words, glances, smiles, or attitudes of other people are among the keenest sources of satisfaction.

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1 Bogardus, E. S. Fundamentals of Social Psychology, p. 58.

In numberless ways individuals seek attitudes of social approval. Arthur Gates says "the child seeks social approval by displaying his repertoire of tricks; the youth, his strength, daring and skill; the adult, by means of personal appearance, clothes, relatives, social connections, wealth, achievement in business, politics, society, athletics, philanthropy, or by wit, generosity, aloofness and in other ways too diverse to recount."[1]

Attitudes of display, boastfulness, pride, and ambition are the most common attitudes that come from the urge and drive for social approval.

h. The Rivalrous Attitude.

Man finds satisfaction not only in being with others and adapting his behavior to their ideals, but also in outdoing his fellows in some undertaking, such as chess, bridge, baseball, or tennis.

This attitude arises whenever persons compete to attain a level of superiority or of power or possession. Bogardus[2] says that this rivalrous attitude grows out of personal contests for selfish possession and creates sentiments of jealously; and that it includes mirrored behavior, for it prompts one to do whatever another does that wins praise.

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1 Gates, A. I., Psychology forStudents of Education, p. 202.
2 Bogardus, E. S. Fundamentals of Social Psychology, p. 60.

Therefore, according to Bogardus, this rivalrous attitude involves competition for recognition. Competition is the very heart of business and general economic life, with both individuals and nations. Children exhibit the tendency at a very early age, and schools make use of it in learning situations. Games and sports emphasize it. Professional advancement is often attended by the spirit of keen rivalry. In all of these situations, attitudes, fair play, or antagonism, are manifested.

A strong mark of individual progress is found in the trend toward rivalry on the higher levels of intellectual and social-moral endeavor, rather than confining it to the physical and economic fields alone.

For example, patriotism is a national attitude, which finds its strength in rivalistic tendencies. Thus, this patriotism of rivalry must not be in militaristic power and glory but in humanitarianism, education, science, social service, and worthy ideals.

4. Attitudes as Feelings, Emotions, and Sentiments.

Feelings and emotions are bound up with attitudes, ideas, and habits of personality. All of these attitudes which control us most profoundly have strong emotional-feeling components. In fact no phase of human life is more worthy of study than our

emotional and feeling attitudes because they play many roles in man's life. They act as drives or motives in getting his work accomplished; they add materially and spiritually to his happiness, and they also contribute to his bodily reactions and health.

a. Nature of Feeling.

According to Arthur Gates, experiences such as "aches, strains, hunger,indigestion, nausea, suffocation, palpitations, fatigue, chills, fever, and many other local or widespread complexes are known as feelings."[1]

Feeling should not be confused with the sensation of touch or pressure. It is the awareness of pleasantness or unpleasantness that accompanies every type of behavior. Every sensation, idea, or motor reaction has its feeling aspect. Feeling must be clearly distinguished, however, from sensations, images, and concepts. It is not initself a sensation, for there is no known sense organ for feeling, nor may any of the feelings be referred to any particular area of the cerebral cortex. Pleasantness or unpleasantness may result from the stimulation of any of the sense organs. That is, a moderate degree of warmth will be pleasant, while an extreme warmth will be unpleasant.

(1) The Classification of Feelings.

In addition to the classification of feelings into degrees of pleasantness and unpleasantness, they are sometimes

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L Gates, A. I. Psychology for Students of Education, p. 145.

classed according to the level of bodily function with which they are associated. On this basis there are (1) sensory feelings which are evoked in direct relation to sensory stimuli and (2) ideational feelings which arise in response to images and ideas. The latter have to do with associated meanings and logical interpretations and are sometimes spoken of as intellectual or aesthetic. They include the social, moral, and religious feelings, that play an important role in attitude study. Most of these attitudes are acquired through learning.

Allport has presented a theory of feelings which correlates the pleasant feelings with the operations of the cranial or sacral division of the autonomic system; and the unpleasant feelings with the activities which involve the sympathetic or thoracic-lumbar division of the autonomic system. He says, "The cranio sacral division of the autonomic, supplemented under certain conditions by the cerebro-spinal system innervates those responses whose return afferent impulses are associated with the conscious quality of pleasantness. The sympathetic division produces visceral responses which are represented in consciousness as unpleasantness."[1]

This theory of Allport's is suggestive and valuable as an attempt to link feelings with bodily reactions. Certainly

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1 Allport, F. H. Social Psychology, p. 90.

pleasant feelings accompany the satisfactions of hunger, thirst, sexual urge, and sensitive zone reactions such as tickling and laughter. As we grow to maturity they are distincly associated with ego or self expansion and sociability. In contrast, unpleasant feelings most often seem associated with rage, fear, pain, and associated inhibitive protective and withdrawal reactions of the organism.

(2) Feeling Attitudes.

The feelings may be evoked indirectly by cortical activity in a conscious state, such as an image. West and Skinner[1] give this illustration. The thought of a snake is accompanied by disagreeable feeling attitudes through the force of certain associations which have been made either through experience with snakes, or through contact with those who have had such experiences. Thus, as Chave and Thurstone say,"a man's attitude about pacifism is all he feels or thinks about peace and war."[2] The feeling attitude may develop out of the subject's personal experience in the war, or from the talk he hears from his friends who have been in the war. He feels and experiences the horror of war which may be the painful emotional attitudes of extreme fear, dread, an abhorence of war. This experience which is vividly felt produces bodily and mental changes in the

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1 Vest, P. V. and Skinner, C.E. Psychology for Religious and Social Workers, pp. 115-116.

2 Chave, E. L. and Thurstone, L.L. Measurement of Attitudes, p. 7.

organism. The resultant is a feeling attitude toward pacifism.

Feelings cannot be referred to the object in the external world, but are always personal. Two individuals will have different feelings when they face the same situation. The influence of feeling in determining a man's attitude toward the outer world is seen if we compare the responses of different individuals under similar conditions; or if we observe how differently the same person acts in two cases where the external situation is similar but his own internal condition is radically different.

Warren and Carmichael[1] in their new psychology text present an illustration of point. Some men apparently can never be disheartened or insulted; others will collapse at the slightest misfortune or bristle at the most trivial remark. The same man who meets difficulties energetically and cheerfully when he is in good health, may refuse to face danger or perplexity when affected by indigestion, malaria, or other weakening influences.

b. Nature of Emotion.

Emotion is a much more inclusive term than feelings. It is the awareness of a complex of sensations, chiefly organic, which are aroused by appropriate stimuli. Facial expressions which register fear, anger, disgust, horror, anguish, joy, doubt,

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1 Warren, H. C. and Carmichael, L. Elements of Human Psychology, p. 32.

tolerance, and so on are perhaps the best known forms of emotional expression. Sudden paleness, flushing, clenched fists, smiling, gritting the teeth, scowling or frowning, squinting and various forms of muscular tension are each indicative of some emotional activity. These facial expressions and muscular tensions are forms of attitudes, presented through muscular adjustment and bodily changes.

We have attitudes of sympathy for those in distress, of anger toward those who frustrate our aims, of intellectual eagerness or weariness toward some problem which has arisen. Our emotional attitudes are perceived largely by us through our kinesthetic and subvocal responses, but we perceive these attitudes in others by observing their overt signs and expressions visually and auditorily. When we solve our problems or dismiss them, or when the distress of the other person who has aroused our sympathies is relieved, our attitudes of eagerness, or weariness, or sympathy disappear, just as our muscular attitudes of defense attack are transformed into some other type of behavior as soon as there is no longer any threat of attack.

The emotion itself is a mental state, probably effected by cortical reactions in very much the same way as ordinary sensations. The stimuli which occasion an emotion are

probably the functional processes of muscles and glands which are in turn the resolt of preceding nerve impulses transmitted to these agents.

The emotion does not markedly characterize ordinary normal behavior where everything is going on smoothly, but usually indicates a crisis or emergency of some kind which calls for special adjustments or readjustments. In addition to the special muscular strains and tensions, the endocrine glands act in such a way as to provide supplemental energy and supply special needs of the organism for the occasion. Woodworth's definition points out this phase of emotional life: "An emotion is a conscious, stirred-up state of the organism".[1] This is the explanation of the excitement which usually attends an emotional outburst.

(1) The Classification of Emotions.

There are various ways of classifying emotions. As a result of the study of very young children Watson[2] names three primary emotions; fear, rage, and love, from which all others are compounded. Woodworth,[3] without special reference to infants, lists as primary emotions: anger, fear, lust, mirth, grief, curiosity, the comfortable state appropriate to digestive processes, and the tender emotions, as of a mother for her babe, and suggests that there may be others.

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1 Woodworth, R. S. Psychology, p. 118.
2 Watson, J. B. Behaviorism, pp. 140-196.
3 Woodworth, R. S. Psychology, pp. 115-130.

According to the group of spinal ganglia which is used in effecting associations, three variant groups of emotions are recognized by Gates.[1] (1) Sex emotions of various kinds, and degrees aroused through the medium of the sacran ganglia, as modified by the cranial ganglia. (2) Mild states of well-being, inconspicuous, but pleasant and expansive, which arise through the energizing of the sacral and cranial divisions. (3) The stronger and better known emotions which depend upon the activity of the sympathetic ganglia: these include (2) anger and other related emotions such as rage, fury, irritation, and possibly jealousy; (b) fear states such as worry, dread, terror, and possibly grief; (c) excitement, nervousness and embarrassment; and (d) pity, sympathy, and enthusiasm.

As a matter of fact, any classification must, to a great extent, be arbitrary since the motions are so intimately related and so varied. The entire organism tends to act in any situation and marked blends of emotional states are the rule.

(2) Relation of Feelings and Emotions.

Before entering into a more pronounced discussion of emotional attitudes, a relationship should be made between feelings and emotions. First of all, the feeling element is always a marked accompaniment of an emotion. It is no more identical with the emotion than it is identical with the sensation.

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1 Gates, A. I. Psychology for Students of Education, pp. 154-163.

Feeling is merely a fact about emotion, and is incidental to it. Because the emotion is a mental state, a complex of sensations, the feelings are usually much more intense and pervasive than is the case in ordinary simple sensations. The kind of degree of feeling which accompanies a particular emotion is relative to the entire situation and the individual experiencing it, and is therefore not readily predictable. An emotional outburst of anger may be very pleasant to one who experiences it, while to another, anger may prove decidedly unpleasant. An individual may derive much satisfaction from such an experience on one occasion, but feel much annoyed by it on another occasion.

(3) Emotional Attitudes.

The foregoing discussion will present some of the outstanding emotional attitudes. There is not time for a complete analysis of all of the emotional attitudes, but a brief survey will be presented to demonstrate the operation of these attitudes in human organism.

No phase of human life is more worthy of study than our emotional attitudes. They furnish one of the very best indicators of a man's personality. Warren and Carmichael[1] state that in civilized society, emotional expression is usually repressed; only critical situations call forth unbridled displays of emotion;

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1 Warren and Carmichael Elements of Human Psychology, p. 320.

but the emotional attitude is rarely washed out completely. The emotion of joy simmers down to cheerful attitudes; repressed emotions of anger lead to hostile attitudes. In talking with a person you can usually tell whether he is annoyed or pleased; whether he is well-disposed toward you or defers to you, or considers himself a bit above you, by something in his manner or tone, if not by his words and actions.

Nearly every class of emotion develops a corresponding attitude. Warren and Carmichael[1] have listed specific groups of human emotions with corresponding attitudes. They present six groupings which involve emotions and attitudes; they are, expressive, reproductive, defensive, aggressive, social, and instinctive and sentimental attitudes and emotions. For illustrative purposes, let us examine two of these groupings:

I. Expressive.

Attitude	Emotion
Cheerful	Joy
Despondent	Grief
Dazed	Shock
Frivolous	Mirth
Zealous	Ecstasy
Erratic	Restiveness
Romantic	Exuberance
Devout	Wonder

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1 Warren and Carmichael Elements of Human Psychology, Appendix IV, Table XVIII.

IV AGGRESSIVE.

Attitude	Emotion
Hostile	Anger
Vindictive	Hatred
Malicious	Envy
Ambitious	Pride
Arrogant	Pride
Bold	Exultation

Our judgments of fact are tinged with emotional attitudes. Warren and Carmichael present a good illustration on this point. Read any account of the American Civil War written in the '60s or '70s - even the '80s. Notice the adjectives applied to Lee and Davis by Northern historians or to Lincoln, Grant and Sherman if the writer is Southern. It fairly startles us to find our own countrymen manifesting these emotional attitudes in writing plain history. The school histories of an earlier generation took a similar emotional attitude toward the "Tories" and "red coats" in the American Revolution, and those of the present generation may emotionalize toward the several nations concerned in the World War. The killing of the Austrian archduke has been described both as a dastardly assassination, and as a sublime act of patriotism.

There are many complex emotional states which are familiar in daily life that call for attitudes. Varying degrees of the affective qualities combine with the major emotions of fear, anger, and love, and also with bodily attitudes for all

possible reactions toward self and others.

Floyd H. Allport[1] sets forth the main attitudes which are found in the emotions of fear, anger, and love. The main attitudes in which fear seems to be important are awe, reverence, bashfulness, surprise, wonder, suspicion, loathing, and anxiety. Anger is recognizable in resentment, remorse, jealousy, envy, reproach, scorn, and hatred. Love plays a part in gratitude, grief, pity, sorrow, fascination, and humility. A number of bodily attitudes, other than attacking, fleeing and caressing combine with pleasantness and unpleasantness to produce special emotional reactions. These states are represented by numerous varieties of approach and avoidance, as well as by joy, elation, pride, conceit, shame, domination, submission, and feelings of inferiority.

Allport states further that since the range of human feelings and emotions is so extensive and complex, "almost every emotional nuance represents an attitude not only to feel, but to react in a highly specific fasion toward some other human being."[2]

In order to discover the essential role of attitudes in the complex emotional states; a brief discussion of the attitudes that are involved in the emotional states of fear and anger will be given at this time. There is neither the time, nor the space,

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1 Allport, F. H. Social Psychology, p. 95.
2 Ibid, p. 96.

to give a complete analysis of the remaining emotions that present attitudinal features and complexes.

In the first place, anger may be classified from a number of different angles. It may be pleasant or unpleasant, depending on the course it takes. Again the anger may be violent or mild. Or it may be treated as to its function for the person. It relieves unpleasant tensions as a kind of purgative. It may be have a distinct survival effect, especially in the more primitive situations of great bodily danger. It may also have a surrogate effect of stimulating the individual work. Anger throughout has a distinct reference to self feelings and the persistence of social status. It is a phase of egotistic development and comes into play where there is any threatened or actual thwarting of desires. Some angers arise in the forms of mild irritability at situations or objects. Or it may be sublimated into anger at social justice and be correlated with attitudes of fair dealing.

Fear, like anger, is a highly significant emotion in the building of social attitudes and habits. It comes into the picture as does anger in dealing with prejudice and collective phenomena. In the latter instances, heightened stimulation of the crowd situation causes a sort of fear contagion

to run through a mob. In the case of prejudice, the fears, like the angers, get standardized into attitudes, ideas, and habits which persist throughout generations of groups living in antagonistic accomodation to each other.

Fear and anger attitudes have certain similarities and differences. In regard to the similarities of these two emotional attitudes, Gates says that "the sympathetic system acts essentially in the same way in anger, vexation, jealousy, fear, or anxiety, except that there is more intensity in some states than in others."[1] All emotional experiences have much in common since the inner changes in smooth muscles and glands are the basis of a very conspicuous part of the complex of sensations which make up an emotion. The fundamental feature of all these strong emotional attitudes is the flood of sensations aroused by impulses from the smooth muscles and glands. Studies of young infants show that it is most difficult to distinguish fearful from angry or irritated behavior by means of observing the crying and muscular reactions.

Both fear and anger attitudes have differences displayed in particular facial expressions, and in muscular tensions, inhibitions, and relaxations in the hand, arms, trunk

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1 Gates, A. I. Psychology for Students of Education, p. 156.

legs, and feet. The observed differences between anger and fear are due to the variations in the patterns of adjustment of the skeletal muscles.

Gates adds another difference. He says "that in fear strong impulses to escape are felt, while in anger, impulses to attack or injure are felt."[1]

A lady of mature years found she had a great fear of being smothered. She had a definite attitude of revulsion against shut-in places, crowds, and bad air. A cold in the head or on the chest caused her unusual worry and dread. An analysis of her case revealed that the most likely source of her difficulty was a bad attack of whooping cough when she was seven years old.

Attitudes of combativeness may arise out of anger. Consider Watson's[2] experiment with babies. If the face or head is held, crying results, quickly followed by screaming. The body stiffens and fairly well coordinated slashing or striking movements of the hands and arms results; the feet and legs are drawn up and down. In older children, the slashing movements of the arms and legs are better coordinated and appear as kicking, slapping, and pushing.

In anger we may kick, punch, bite, scratch; while in fear

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1 Gates, A. I. Psychology for Students of Education, p. 157.
2 Watson, J. B. "A Schematic Outline of the Emotions", Psychological Review, Vol. 26, pp. 165-177.

we may run or stand still. Indeed anger and fear may be suddenly interchanged. Symonds[1] gives the illustration of a cat that is pursued by a dog, may suddenly turn and offer its claws, and through this renewed combative spirit, may cause the dog to turn and show fear.

Thus, from this discussion it is possible to see that attitudes of revulsion, avoiding, submission, anxiety, worry, and scorn, hatred, hostile, combative, are exposed in the emotional states of fear and anger.

c. Nature of Sentiments.

Besides feeling and emotion, there is another important experience connected with our physiological process, called "sentiment". "Sentiment" was used by French writers, Ribot, Binet, and others, as a general term for the entire field of affective life. Alexander Shand has made a distinct contribution by distinguishing the sentiments from the emotions. Shand pointed out that the sentiment, as a product of social experience, is an organization of emotions around the idea of an object. Mc Dougall adopted Shand's definition and described the organization of typical sentiments as love and hate.

Shand[2] points out that our emotions, or more strictly speaking,

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1 Symonds, P. M. Nature of Conduct, p. 211.
2 Shand, Alexander F. Foundations of Character, pp. 35-63.

our emotional dispositions, tend to become organized in systems about the various objects and classes of objects that excite them. Such an organized system of emotional tendencies is not a fact or made of experience, but it is a feature of the complexly organized structure of the mind that underlies all our mental activity.

A sentiment, as defined by Mc Dougall, is "an organized system of emotional dispositions centered about the idea of some object."[1]

(1) Attitudes as Sentiments.

A significant feature of sentiments and attitudes is inner tension and consequence tendency to mutation. Love changes into hate, or dislike is transformed into affection, or humility is replaced by self-assertion. This mutability is explained by the fact, just mentioned, that the sentiment-attitude is a complex of wishes and desires organized around a person or object.

Maternal love, for example, includes the emotions of fear, anger, joy, or sorrow, all organized about the child. Park and Burgess[2] say that it is the mother's fostering care of the child which develops her sentiments toward it, and the sentiment attaches to any object that is bound up with the life of the child. For example, the cradle is dear to the mother

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1 Mc Dougall, William Social Psychology, p. 121.
2 Park, W. E. and Burgess, E. W. Introduction to the Science of Sociology, p. 477.

because it is connected with her occupation in caring for the child. The material fears for its welfare, her joy in its achievements, her anger with those who injure, or even depreciate it, are all part of the maternal sentiment.

Park and Burgess[1] state that the mother's sentiment determines her attitude toward her child, toward other children and toward children in general. Just as back of every sensation, perception, or idea there is some sort of motor disposition; so our attitudes are supported by our sentiments. Back of every political opinion there is a political sentiment, and it is the sentiment which gives force and meaning to opinion.

The growth of sentiments is the utmost importance for the character and conduct of individual and of societies. Mc Dougall[2] says that in the absence of sentiments, our emotional life would be a mere chaos.

Many of our judgments of value and of merit are rooted in our sentiments. For example, using Mc Dougall's illustration, "A single act of kindness done by A to B may evoke in B the emotion of gratitude; and if A repeats his kindly acts, conferring benefits on B, the gratitude of B may become habitual, may become an enduring emotional attitude of B towards A - a sentiment of gratitude. Or, in either case, a single act - one evoking very intense fear or gratitude - may suffice to render

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1 Park and Burgess Introduction to the Science of Sociology, p.478.
2 Mc Dougall, W. Social Psychology, p. 130.

the association more or less durable, and the attitude of fear or gratitude, of B toward A more or less permanent."[1]

Warren and Carmichael tell us that "the essential factor in many sentiments is the actual bodily attitude of the experiencing individual."[2]

Certain bodily attitudes are correlated with pleasant and satisfying mental states. For example, when an individual contemplates a beautiful building, he is himself behaving in a particular manner. That is, he is feeling himself into the beautiful object. Warren and Carmichael call this an example of an empathic response. By empathy he becomes aware of the pleasantness or unpleasantness of the observed object for him. The attitude then assumed, together with images of the past, makes up the sentiment of the moment.

C. Summary and Final Definition of Attitude.

At the very beginning of this chapter, the discovery was made that to define attitude was no small task. Almost all of the writers in sociology, psychology, and education used different terms to describe the concept of attitude.

With a review of the psychological nature of attitude new windows were opened and new light revealed, at least, some common elements involved in attitudes. Postural and neural sets

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1 From Mc Dougall, Wm. Introduction to Science of Sociology, p. 467. Quoted by Park and Burgess.

2 Warren and Carmichael Elements of Human Psychology, p. 242.

and adjustments; organic drives, urges and motives displayed the physiological elements of attitudes; while the feelings, emotions, sentiments, and generalized conduct portrayed more of the psychic element of attitudes. No hard and fast line of demarcation can be drawn between these two contributive elements, because there is an interchange and an interdependence of both these elements in each other.

One of the main items to note is the fact that attitudes are existing in much of our conduct and character that we are unaware of; and that attitudes are playing a vital and dynamic role in our bodily and psychic reactions. With this discovery, there is no doubt of the fact that attitudes ought to be measured and that the measured evidence will contribute greatly to the study of human personality.

This entire chapter has been devoted to the discussion as to the nature and the meaning of attitude. As a result of this study a final definition of attitude is offered.

It seems to the writer that an attitude of an individual is his mental, or motor set, involving his neural, muscular, and psychical adjustment toward an object or situation; which displays his actions, thoughts and feelings of both his affective and cognitive nature.

The act of praying offers a good illustration of this definition of attitude. First of all, the subject assumes a muscular set by kneeling at the altar, bowing his head, and clasping his hands. The mere adjustment of the subject to the object - God, shows the reverence which has been built up in the neural and mental processes. The subject repeats words, phrases, and sentences in praise and thanksgiving to God. The subject begins to feel a sense of security in the sanctuary of God, caused not only by his muscular and neural sets, but also by his psychic adjustment. The feeling of devotion and gratitude may become so intense that the subject may display his actions by arising to his feet, by extending his arms upward, and by singing praises to God. As a result of this experience the individual feels and knows the comforting power of God.

CHAPTER III.

THE MEASUREMENT OF ATTITUDES.

A. The Measurability of Attitudes.

From the first time that human beings took an interest in each other, they have measured each other's intelligence, character, and conduct. They have compared one person with another, and a person with the average of the group with reference to his keenness of intellect, honesty, skill, or some similar characteristic. It may be said that they even selected some person in preference to others because of their estimates of superior ability in this or that quality. It is safe to say that along with these personal estimations of individuals there was in existence certain attitudes, that influenced the decision.

Our study thus far has revealed that our attitude is a complex and many-sided phenomenon. To argue that it can be wholly described by a single numerical or other index would indeed be a dangerous contention. But as Thurstone has pointed out:

> "for the problem of measurement this statement is analagous to the observation that an ordinary table is a complex affair which cannot be wholly described by an single numerical index. Nevertheless we do not hesitate to say that we measure the table. ...The context usually implies what it is about the table that we propose to measure, for example, its height, its cost or beauty, or degree of appropriateness, or the length of time required to make it...We say without

> "hesitation that we measure a man when we take some anthropometric measurement of him. The context may well imply without explicit declaration what aspect of the man we are measuring, his cephalic index, his height or weight, or what not."[1]

Therefore, it seems to follow that if we specify or imply by the context what aspect of people's attitudes we propose to measure, it is just as permissible for us to say that we are measuring attitudes as to say that we are measuring tables or men.

In measuring attitudes, as well as all physical objects, "a linear continuum"[2] is necessary. For example, in the physical world, there exists lengths, strengths of an electric current and intensities of illumination which have any value from zero to the nth power or infinity. The centimeter, the ampere, and the foot candle represent the units by means of which we measure the magnitudes of the attributes given above. Rosander says that unless one is willing to admit that attitude can exist in degrees extending from zero in one direction to an undetermined magnitude in the other, "then measurement of attitude is impossible for the simple reason that there is nothing to measure".[3] For example, there are those, says Rosander, who believe in the "all or none" nature of attitude. Thus they have no need for measurement.

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1 Thurstone, L. L. "Attitudes Can Be Measured", Am. Jr. of Sociology Vol. 33, pp. 530,531,536.

2 Rosander A. C. "Can Attitudes Be Measured" Phi Delta Kappan, Vol. XIII, p. 77, 1930.

3 Ibid, p. 77.

To them one is either for prohibition or against it, either in favor of law enforcement or opposed to it, either honest or dishonest. On the other hand, we find that those who are attempting to construct real attitude tests and scales, whether it is by means of overt behavior, as exhibited by Hartshorne and May[1] or by means of verbalization as exhibited by Thurstone[2], are striving to isolate a rational unit. It is rather safe to say that, according to Rosander, there are three issues involved in attitude measurement; the nature of the concept, the valid manifestations of attitudes, and the isolation of a mental unit of measurement.

B. Two Theories of Attitude Measurement.

There are two principal aspects of attitudes which we are interested in measuring, first, those attitudes which are revealed in overt behavior, and second, those attitudes which are revealed in verbal responses or opinions.

1. The Measurement of Overt Behavior.

The chief exponent of the view that attitudes are revealed in overt behavior is Read Bain. Many other men hold this same point of view but Bain makes a very marked disctinction in his conception of attitude as overt behavior.

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1 May, Mark A., and Hartshorne, Hugh "First Steps toward a Scale for Measuring Attitudes", Journal of Ed. Psych. Vol.17, pp. 115-162.

2 Thurstone, L. L. "A Mental Unit of Measurement", Psychological Review, Vol. 37, pp. 415-423.

First of all, Bain says that an "attitude is the relatively stable overt behavior of a person which affects his status".[1] Bain goes on to say that he includes the word "overt" in his definition to emphasize the fact that an attitude designates the total response of a person to a total situation. Feelings, sentiments, tendencies to act, wishes, attitudes, and so on, "mean nothing and worse than nothing unless they are interpreted as overt behavior of some kind. In other words, we cannot speak of the existence of attitudes or wishes or sentiments, or any other phenomena of consciousness except as they are manifested in overt behavior."[2]

Bain's main contention is this; that attitudes are not opinions, and therefore, the measurement of opinions, is not the measurement of attitudes.

Bain draws another distinction, so to speak, when he talks about verbal responses and opinions. It is to be noted that thinking and verbation are forms of physical action, and hence, they may be important in fixing the status of an individual. Thus, Bain would say that we could properly speak, then, of verbal attitudes; but, since verbation does not always pass over into overt action, attitude should be reserved for the total "status-fixing" response of a person. This "status-fixing" idea

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1 Bain, Read "An Attitude on Attitude Research", American Journal of Sociology, Vol. 33, p. 950.

2 Ibid, p. 950.

of Bain's implies a certain stereotyped and repetitive type of behavior.

Verbal attitudes are of no value when we are attempting to study overt behavior. Bain throws aside the use of the questionnaire tests, which ask "what you believe, think, or feel", on a certain issue, because we can never be sure that the subjects do act, did act, or will act as their replies indicate. The undermining factor in the verbal response questionnaire, which destroys its reliability and validity as a measure of attitude is the fact that the subjects lie, forget, rationalize and misunderstand the questions. Bain goes on to say that even if verbal attitudes do correlate with overt actions of an individual, that does not add anything to our knowledge of behavior as such. The correlation of verbal attitudes and overt action will be discussed a little later in this section of the thesis.

Bain made an investigation of the religious attitudes of college students by the questionnaire method.[1] He asked questions such as: "Is God a Person?"; "Is the Bible a mythological account?"; and "Do you believe in the resurrection of the body?". After the results of this study were tabulated and evaluated, Bain discovered, much to his disappointment, that he measured opinions instead of attitudes.

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1 Bain, R. "Religious Attitudes of College Students", American Journal of Sociology, Vol. 32, p. 764.

In order to see how Bain's definition of attitude would operate in this situation, consider his own criticism where he says that to really measure attitudes, and not opinions, it is necessary to ask questions like the following: "Are you a church member?";"Do you read the Bible?";"How much?";"How often?"; and "Do you pray?"; "What do you say in your prayers?"; "Give examples." These questions would at least give some evidence of the overt action, or behavior, of the individual and therefore, would indicate a measurement of attitude.

Another way, which is much better than the latter just referred to, would be to get indirect evidences of the actual behavior of the individual. For example, church membership could be determined from matriculation cards; church attendance could be observed; frequency of church attendance could be tabulated; and individual participation could be noted.

In other words, Bain would get the attitudes of people by observing and recording their behavior actions in actual life situations. This would be a better index, according to Bain, of obtaining a person's attitude, than to have the individual record, his thoughts and feelings about a certain situation, on a piece of paper.

Now the question to be asked is this, Where does this "status-fixing" element enter that Bain talks about? He would say that if a church emphasizes belief in a personal God, the supporters of the church may possibly be said to have a personal-God attitude. But there are many other factors than belief in a personal God which contribute to the church-supporting actions of such people. We can only be sure of this, says Bain, "that church supporting is a status-raising action in some communities, and is, therefore, an attitude."[1]

In conclusion, we can say, that the only way to determine attitudes, according to Bain, is by observation and statistical treatment of behavior in social situations. Thus the best general method for measuring attitudes is the statistical treatment of indirect evidences of overt behavior in carefully defined or experimentally controlled situations.

2. The Measurement of Verbal Response.

L. L. Thurstone and E. J.Chave of Chicago University upbold the view that opinions and verbal responses are indexes of attitudes. Recalling their definitions of the concepts attitudes and opinion, will aid as a foundation for this discussion.

Attitude was used by them "to denote the sum total

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1 Bain, Read "An Attitude on Attitude Research", p. 955, Vol. 33.

of a man's inclinations and feelings, prejudices or bias, preconceived notions, ideas, fears, threats, and convictions about any specified topic. Thus a man's attitude about pacifism means here all he feels and thinks about peace and war. It is admittedly a subjective and a personal affair."[1]

Opinion means a "verbal expression of attitude. If a man says that we made a mistake in entering the war against Germany, that statement will be spoken of as an opinion."[2] Thurstone and Chave restrict opinion to verbal expression and then state that an opinion symbolizes an attitude.

Let us now consider what it is that Chave and Thurstone want to measure. Consider their explanation. They say that:

> "When a man says that we made a mistake in entering the war with Germany, the thing that is of interest, is not really the string of words as such, or even the immediate meaning of the sentence merely as it stands, but rather the attitude of the speaker, the thoughts and feelings of the man about the United States and the war and Germany. It is the attitude that really interests us. The opinion has interest only in so far as we interpret it as a symbol of attitude. It is therefore something about attitudes that we want to measure. We shall use opinions as the means for measuring attitudes." 2

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1 Thurstone and Chave Measurement of Attitudes, p. 6 and 7.
2 Ibid, p. 7.

Professor Faris says that Chave and Thurstone measure opinions and not attitudes. Bain also contends that the opinion measurement of these two men is not attitude measurement. Thus, Chave and Thurstone bear the brunt of the attack in opposing Bain and Faris. Chave and Thurstone come back at their opponents and state that it is in part a terminological question which affects the understanding of the term "attitude". They suggest that if their concept of attitude as here defined is not acceptable, it may be advisable to change the terminology provided that a distinction is retained between (1) the objective index, which is here called the statement or opinion, and (2) the inferred subjective inclination of the person which is here called the attitude variable.

The problem that arises now is the uncertainty of using an opinion as an index of attitude. Thurstone, in his article, Attitudes Can Be Measured[1] gives the following example:

> "A man may be a liar. If he is not intentionally misrepresenting his real attitude on a disputed question, he may nevertheless modify the expression of it for reasons of courtesy, especially in those situations in which frank expression of attitude may not be well received. This has led to the suggestion that a man's action is a safer index of his attitude than what he says. But his actions may also be distortions of his attitude. A politician extends friendship and hospitality in overt

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1 American Journal of Sociology, Vol. 33, p. 532.

> "action while hiding an attitude that he expresses more truthfully to an intimate friend. Neither his opinions nor his overt acts consitute in any sense an infallible guide to the subjective inclinations and preferences that constitute his attitude."

The conclusion that is reached by Thurstone is that we must remain content to use opinions, or other forms of action, merely as indices of attitude.

The method of measuring attitudes by Thurstone and Chave, is by an expression of acceptance or rejection of opinions. Now this does not mean that a person will necessarily act in accordance with the opinions that he has indorsed. A man may believe that he should be friendly to all men, but in his actual behavior he may do severe harm to the negro.

Thurstone makes it very clear that the measurement of attitudes expressed by a man's opinions does not necessarily mean the prediction of what he will do. A man's inconsistencies, regarding his opinions and actions are not of interest to Thurstone because he is not setting out to predict overt conduct. Yet it is of interest to know what people say they believe even if their conduct turns out to be inconsistent with their professed opinions; and even if they are intentionally distorting their attitudes because their attitudes, which they are trying to make people believe they have, are measured.

Finally, Thurstone comes to the conclusion that all we can do in attempting to measure attitudes "is to measure the attitude actually expressed with the full realization that the subject may be consciously hiding his true attitude, or that the social pressure of the situation has made him really believe what he expresses".[1] Thurstone states further that all we can do is to minimize as far as possible the conditions that prevent the subjects from telling the truth or else to adjust the interpretations accordingly because this whole matter is a process of interpretation. Furthermore, it is highly worth while to measure an attitude as expressed by opinions.

3. Summary and Synthesis.

The discussion thus far has presented the two outstanding conceptions of attitudes, and attitude measurement. These two conceptions are in opposition to each other. There is a great need for an attempt to synthesize these two truths into a less antagonistic viewpoint.

It appears that the real conflict arises over what constitutes a valid manifestation of attitude for measurement purposes. Bain thinks that the more complex overt behavior is the sole criterion; and Thurstone, in his attitude scales, uses elemental verbal responses as indicators of attitudes.

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1 Thurstone "Attitudes Can Be Measured," Am. Jr. of Sociol, Vol. 33, 1928, p. 534.

The fact that opinions or verbal responses are frequently very unreliable guides to a person's so-called "true" attitude, that is, what he would do in a concrete situation, this does not destroy entirely the value of the verbal behavior as an index to his attitude, although it is suggested that a person's actions are a safer indication of his attitude than what he says.

It is frequently demonstrated that a person's "true" attitude is found not always in his actions. George Lundberg[1] gives us an example of this situation: When the politician kisses negro babies as an expression of his friendly attitude toward the negro race, his action probably is no more accurate index of his "true" attitude than is his impassioned utterances from the platform to that effect. Both are just as "true" attitudes in their respective situations as the views he expresses or the action he takes toward negroes after the election.

Lundberg goes on to say that

> "The attitude which a person exhibits, whether through verbal or overt behavior in a given situation represents his attitude in that situation"2

How his responses in a hypothetical or symbolic situation correlate with his behavior in a similar concrete situation involving complete overt adjustment can only be determined by a study of both kinds

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1 Lundberg, George Social Research, p. 201.
2 Ibid, p. 202.

of behavior in their respective situations. Such an index, says Lundberg "can be made reliable only through a careful study, and analysis of the conditions under which the behavior takes place - the whole situation - and from this infer whatever neuro-psychic or neuro muscular set of a relatively permanent kind which we choose to hypothecate and call the attitude."[1]

Most students of psychology and social psychology agree that attitude has a subjective quality. There are a number of ways in which we express this subjectivity for example, we may show it in our speech, our writing, our voting, our work and our play. Because attitude does make itself known through many different avenues, we may use any one or all in this phenomenon.

Rosander[2] tells us that it is a well known fact in the physical world that measurement may be based upon the effects of the thing measured, and not at all on the thing measured. "Electricity is a good example. We know little as yet about the real nature of electricity but yet we can measure it very accurately. This is done indirectly by measuring the chemical, magnetic, or heating effects we know that electricity produces."[3] Hence we can measure attitudes by means of their

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1 Lundberg, George Social Research
2 Rosander, A. C. "Can Attitudes Be Measured" Phi Delta Kappan, Vol. XIII, p. 77.
3 Ibid, p. 77.

manifestations providing we can establish a relationship between these manifestations and the thing itself. This means that if the concept attitude means something that cannot be verbalized, then obviously any attempt to measure it through verbalization will be futile. The same is true if attitudes cannot be "behaviorized", then there is no point in attempting to find overt evidences of them.

Rosander says the real issue is this:

> "We need to determine the manifestions of the attitudes we are attempting to measure. In this particular case the difference between those who favor the verbalization approach and those who favor the overt behavior method is not striking as it seems. In truth, verbalization is overt behavior and in many situations constitutes real and significant behavior in what Bain calls 'life situations'."[1]

Rosander goes on to say that even though we do find a discrepancy between verbalizations and overt actions, this may mean that personality is unorganized. It seems that the more a personality is integrated the higher will be the correlation between what a man says, and what he does. Furthermore, any differences to be discovered between verbal response and overt behavior do not necessarily invalidate any of the methods of measurement.

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1 Rosander, A. C. "Can Attitudes Be Measured?", p. 77.

C. Correlation Between Verbal Responses and Overt Behavior.

One of the most interesting studies in attitudes is to discover the existing correlations between verbal responses, and overt behavior. Measures of this relation are very scarce in the literature of this field. Some students have attempted to determine the degree of correlation between verbal responses and actual behavior. For instance, Carle C. Zimmerman in his study of "Types of Farmer's Attitudes", and Hartshorne and May in their study of "Testing the Knowledge of Right and Wrong have discovered correlations.

Zimmerman found that a high percentage of farmers who had ten or more years of experience with cooperation favor it. That is, overt attitudes are correlated with verbal attitudes. The following table gives evidence of this.

* This table illustrates the correlations of cooperative experience with attitudes favoring certain organization business practices.

345 cases

Type of Cooperative Business Practice	Gross correlation coefficient between favorable attitudes and experience.
Use of membership contracts	+ 0.466
Use of capital stock in organization	- 0.015
Dealing with non-members	+ 0.587
Pooling of sales product	+ 0.907
Use of federated type of organization	+ 0.533
Use of supply and demand price	+ 0.452
Central control of quantity of production	+ 0.701
Central control of quality of "	+ 0.581

* Zimmerman, C. C. "Types of Farmer's Attitudes", Social Forces, Vol. V, 1927, No. 4. p. 594.

A number of correlations of the relationship between experience and attitudes in favor of certain practices were established. Some of those are given in the above table. It is to be noticed that all of those practices of cooperative marketing associations had definite relationships with experience, except the second; namely, the use of capital stock in organization. Zimmerman says that the lack of relationship in this instance may be attributed to recent propaganda for the non-stock types of organization, which had not been tested in Minnesota at the time of study, and to the sad experience the farmers had had with the capital stock organizations fostered by the Non-Partisan League. Now the important conclusion to be drawn from this table is that the so-called psycho-social controls which regulate the cooperative experience of each new generation of farmers are mainly the offspring of the experience of farmers of the past.

The second illustration is from the work of Hartshorne and May who say, with reference to the relation of verbal responses and actual behavior:

> "Ninety-one per cent of those who say it is all right to let another pupil copy your work and hand it in as actually his own, cheated themselves. One hundred per cent of those preferring to smash the slot machine to recover their lost nickels actually cheated on the test. Ninety three per cent of those who thought it right for John to cheat in order to help his class

"win actually cheated themselves. It is noteworthy that these high agreements among the cheaters are in regard to cheating in two cases; to property, to property in the third; and not in any instance to other types of behavior."[1]

It is possible to say, with a great deal of assurance and verification that verbal responses and actual behavior response have a correlation. Thus this means that what a man thinks, feels, or believes, is carried over into his actual behavior expressions. This evidence is highly significant for the purposes of measurement; because verbal responses will yield evidences of attitudes in man's behavior.

L. A. Stauffer has shown another way to get trustworthy results. If we have case history records of several individuals we can judge very accruately the attitudes about which the records give information. Stauffer had severaljudges read case records without discussing them with one another and their ratings of the subject's attitudes correlated on the average .96: It seems from this study that we are safe in going ahead with a method of which we have been rather dubious. We can translate case data into statistical data with smaller risk of error than we believed, and thus new avenues of research are opened.[2]

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1 Hartshorne, Hugh and May, Mark "Testing the Knowledge of Right and Wrong, Religious Education, Vol. 21, p.

2 From Joseph K. Folsom's book Social Psychology, p. 5-10, in which he presents material from L. A. Stauffer's doctor's dissertation, Chicago University, 1930: "Experimental Comparison of Statistical and Case History Methods in Attitude Research."

D. A Description and Evaluation of Attitude Tests and Measuring Techniques.

1. Preliminary Considerations.

Before an attempt is made to describe and evaluate attitude tests and measuring techniques, it is necessary to consider (1) a plan of study that can be used to describe and evaluate these tests; (2) a plan that can be used to classify the various techniques of attitude measurement; and (3) a criterion that can be used for the selection of tests.

a. The Plan of Study Used to Describe and Evaluate Attitude Tests.

At the present time many attitude questionnaires have been used to "explore" and to"tap" attitudes on various social, political, economic, and religious issues. Within the last decade scores of attitude tests have been worked out by research workers.

The purpose of this section of the chapter is to present several studies of attitude tests. No attempt will be made to present these tests in chronological order, or to present all of the available attitude tests. The aim is to describe and to evaluate certain attitude tests of importance, and to present the techniques that are used to measure attitudes as exhibited in these tests.

It is necessary in the describing and the evaluating of these tests to have a plan of procedure so that there is a logical and consistent approach to the study of these tests. The following plan is set forth as an aid to the study of the attitude tests. Six important items are included in this plan:

(1) The Study:

The discussion under this item includes the name and author of the test; the name and address of the publisher of the test; and the name of the book or article where a full description and interpretation of the test can be found.

(2) The Range:

This item indicates the range of ages in which the test can be used.

(3) The Purpose of the Study:

Here a short paragraph is given concerning the purpose of the test in order to know what the experimenter started out to measure.

(4) The Nature of the Study:

The discussion under this item includes a description of the construction of the tests; the reliability, norms, and validity of the test; and an interpretation of the scoring method and practical considerations of the tests such as the time

element and the rapidity of scoring.

(5) Results of the Study:

A brief discussion is given in this item on the results of the test as found by the experimenter.

(6) Evaluation of the Study:

Here an attempt is made to find out if the test is in harmony with the aims of education; and whether or not the test measures what it purports to measure. Advantages, disadvantages, and limitations of the test technique are discussed. A reference is also made to the definition of attitude that the experimenter uses in his test.

b. The Classification of Techniques Used to Measure Attitudes.

Another consideration is to find a plan for the classification of the techniques that are used to measure attitudes. A number of attempts have been made to classify the methods and techniques used in attitude measurement. For example, Dobra, Rosander, and Lundberg set forth various ways of classifying the techniques used to measure attitudes. These procedures will be discussed briefly.

This section is an important part of the thesis because the major proposition of this discussion is to demonstrate that attitudes can be measured. This section, therefore, sets out not

only to explain and to interpret the techniques used in measuring attitudes but also to discover to what degree and depth these techniques measure attitudes. Let us now review the classifications of techniques that are used for attitude measurement as set forth by Dobra, Rosander, and Lundberg.

(1) D. D. Dobra's Method:[1]

Dobra sets forth five methods that have been used by investigators for measuring attitudes. The method of construction was used as a basis for classification:

(1) The questionnaire method which consists of a series of unscaled questions or statements selected by a few judges to represent opinions or attitudes.

(2) The ranking method in which a number of items representing either the object of opinion or the opinion itself is arranged in rank order.

(3) The rating method which refers to self ratings, or ratings by others on an arbitrary scale with respect to certain attitudes.

(4) The method of paired comparison in which two items of a pair of words, phrases, or sentences representing the opinion are compared by the subject. He is asked to indicate which of the two items is preferable.

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1 Dobra, D. D. "Methods Used for Measuring Opinion", American Journal of Sociology, Vol. 37, pp.410-423.

(5) The main principle which is involved in the method of equal appearing intervals is that statements, representing the opinions are sorted into a number of piles, say nine or eleven, according to the degree of opinion expressed in the statements. Arrangement of the piles is such that the differences between the piles appear to the subject approximately equal.

(2) A. C. Rosander's Method:[1]

Rosander uses the following classification for attitude indicators:

(1) Agreement or disagreement. A person checks "yes" or "no" to a given statement.

(2) Intensity of agreement or disagreement. The person indicates the degree of feeling he thinks he shows toward different situations that are displayed on an assumed numerical scale.

(3) Order of preference. A person ranks a list of items in order of the favorableness, and unfavorableness.

(4) Assumed scale values. A person checks a statement which has an assigned scale value of certain degree of intensity for or against a particular item or object.

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1 Rosander, A. C. "Can Attitudes Be Meausred?" Phi Deta Kappan, Vol. 13, 1930, pp. 75-94.

(5) Computed scale values. A person checks a statement which has a computed scale value based upon the authority of judges. These scale values range in scale from unfavorableness to favorableness toward an object or situation.

(3) G. A. Lundberg's Method:[1]

Lundberg sets forth the following methods for his study of attitude tests.

(1) Life history documents which include biographies case histories, letters, diaries, or memoirs.

(2) Oral interviews where an examiner aims to secure narratives exposing important details of a certain situation.

(3) Questionnaire and rating tests of which the following are examples:

(a) The "cross out" test, in which the subject is asked to cross out each word which suggests something pleasant or unpleasant, humorous; etc.

(b) The "yes" or "no" question.

(c) The "degree of truth" test, in which the subject is asked to indicate whether he considers a proposition absolutely true, probably or partly true;

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1 Lundberg, George Social Research, pp. 204-234.

(d) The inference test, in which the subject is asked to indicate which of several statements can be inferred from a given statement.

(e) The arguments test, in which the subject is asked to indicate which arguments on both sides of the question are strong and which are weak.

(f) The moral judgment test, in which the subject is asked to indicate which of several stated ethical attitudes he takes toward a given question.

(g) The generalization test, in which the subject is asked to indicate, for example, whether he believes "All, most, many, few, or no Sunday School teachers are doing more harm than good."

(h) The attitude scale. In this complicated method, free written statements of attitude toward a given question are collected from many persons. These statements are then classified and arranged upon a linear scale, with the extreme attitudes at the ends of the scale, and the more moderate ones in the middle, all arranged in such order that any specific attitude statement can be assigned to some point upon the scale. The scale is commonly divided into some ten or fifteen degrees.

As a result of these different studies of the techniques used to measure attitudes, the following outline is the plan that will be used in this thesis for the classification of the techniques of attitude measurement.

1. Life History Materials.
2. The Oral Interview.
3. Objective Attitude Test Techniques.
   A. The "Yes"-"No" Test
   B. The "Cross-Out" Test
   C. "Degree of Truth" Test
   D. Inference Test
   E. Moral Judgment Test
   F. Arguments Test
   G. Generalization Test
   H. Agreement-Disagreement Test
   I. Intensity of Agreement-Disagreement Tests
   J. Rank-Procedure Test
   K. The Rating Tests
   L. The Attitude Scale
   M. The Duplicating Technique

The description and evaluation of the techniques of attitude measurement will be discussed after an analysis is made of the attitude tests.

c. The Criteria Used for the Selection of Attitudes Tests.

The attitude tests used in this thesis were selected according to a criterion. Mc Call once said that "in common with measurements for any purpose, experimental measurements should satisfy certain fundamental criteria."[1] In other words, tests should be selected and constructed with certain criteria

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1 Mc Call, W. A. How to Experiment in Education, p. 82.

in mind. Although the criteria selected were not mutually inclusive, it was necessary to point out the specific items that should be considered in the selection of tests.

The tests in this thesis were selected on the basis of the following criteria:

(1) That the test should be in harmony with the valid aims* of education.
(2) That the test should offer, as far as possible, a natural situation and reponse, even though controlled and directed.
(3) That the test should be practical, i. e., the test should require a reasonable amount of time on the part of the tester and the testee and that the test should have important test material with ample directions for the proper use of it.
(4) That the test should be reliable; i. e., a test is reliable when two applications of equivalent test to the same pupil yield identical scores.
(5) That the test should be valid; i. e., the test should measure what it sets out to measure.

In the following descriptions and evluations of tests, the writer was helped or hindered in fulfilling these criteria by the amount of material presented in the original sources. Some of the test studies, presented a complete and thorough analysis of the entire study; while, in others, the test studies were presented with slight and scanty descriptions and interpretations.

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* This means that the aims of education should be furthered by the use of the test. According to Thorndike and Gates (Elementary Principles of Education, p. 31) "the ultimate aims of education are those which assist persons to acquire knowledge, skill, moral ideals, and attitudes, culture and mental power of certain kinds and in certain degrees, and to secure happiness and to grow and to perfect themselves in certain ways". Hence the test should be able to further these aims and objectives.

2. The Description and Evaluation of Attitude Tests.

At the beginning of this description and evaluation of attitude tests there is presented some information on "Life History Materials" and "Oral Interviews", as indicators of attitudes. These methods and techniques are more subjective than they are objective, yet a brief presentation of these methods should be given because they are becoming very important and prominent at the present time as measuring instruments in psychiatric clinics.

The section on "Objective Attitude Tests" will be discussed at length because of the objectivity of these tests and measuring techniques. The analysis of these tests will follow the outline of study suggested by the plan previously described.

Let us now turn to the study of attitude tests and measuring techniques.

a. Life History Materials:

At the present time, there is a feeling on the part of many students that life history materials have the advantage over mere opinion questionnaires as indicators of attitudes in that they are more likely to reveal not only the attitude but the genesis and evolution of that attitude.

These life history materials include biographies, case histories, letters, diaries, and memoirs. Two examples will be given from these life history materials; first, a biography and second, a case history.

The following biography is a study of racial attitudes. The study shows how a community reacted to a colored family. Attitudes of antagonism and race prejudice are revealed. The subject in the study tells of her experience and the results of her experiences, with the same colored family in which she reveals favorable attitudes.

> "Until the age of seven I had never seen a Negro person, and therefore I could not have had any favorable or unfavorable attitude for them before I came into contact with them.
>
> "About the year 1913 a great number of Negroes who were seeking better working and living conditions migrated from the South to the North and located in Cleveland. At this time, there happened to be a small one-family house vacant in our neighborhood. Since this house had been an exceptionally good placd to play hide-and-seek, we all looked with horror to the day when some one would rent it. One day I saw a large moving van unloading an abundance of furniture and it was obvious that some one was moving into the house. In vain I tried to locate some of the new comers, but none could be found. My brother, who was two years older than myself, was hopefully praying that the new neighbors would include several new boy friends, while I, on the other hand, looked forward to meeting at least one new girl friend.

"That evening I heard my parents discussing at great length the new strange neighbors. The conversation ran something as follows. "The grocery man has promised not to sell merchandise to these new people for that would drive away his trade!" The next morning a close neighbor paid us an unusually eraly visit. The discussion was about the new family. My curiosity was reaching its climax. Who were those new neighbors and what were they like? Just as I was starting off to school, I saw a little girl making her exit from the much-talked-of house. My first glance at her caused me to start back a bit. Perhaps I rubbed my eyes, for it was impossible to believe what I saw. Little cork-screw curls and a tan face. As she turned to look at me, I met a great big smile beckoning me to come across the street. If I did have some fear of her, it had all vanished, and my curiosity was leading the way.

"I immediately decided that I liked her but unfortunately the beginning of friendship was delayed for Mother had forbidden me to associate with the new neighbors' girl. Although I could not associate with Eulah, I always met her cheerfully and did not hesitate to walk to school with her, when Mother was not on her guard. The following summer I became ill and was unable to attend school for two weeks. One day, Mother came into the room carrying a small rubber ball which Eulah had sent to me. Although Mother did not look pleased, I knew that she liked Eulah's thoughtfulness. Each day after this one I received a little note from my conscientious little friend. The first day that I was permitted to leave the house Mother accompanied me on a little visit to Eulah's home. I learned that during my absence from the group,

"all of my friends had discovered that Eulah was a nice girl and had eagerly accepted her as a real friend. When I entered high school we moved from this neighborhood but Eulah's friendship has never been forgotten.

"As new experience often succeeds in changing one's attitude, I feared that some day I would also learn to dislike the Negro as most of my friends do. However, my experience with a group of Negro children at camp this summer has left no negative effect. In fact, instead of any dislike appearing, I have become very much interested in the Negro problem as a whole. Whether future contact or knowledge of them will change my present attitude is very difficult to foretell."1

The next study presents part of the conclusion of a particular case history. Case history study is very prominent at the present time. Psychiatric clinics obtain an enormous amount of material of family data for a subject that is studied. Case history material is usually obtained by fairly relabile methods, so that the results of the studies can yield critical data in regard to attitudes. The following case study shows the effect of the parents' attitude in their daughter's reactions.

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1 Lasker, Bruno Race Attitudes in Children, pp. 66-67.

The following quotation is from the conclusion and interpretation of the case history.

> "The underlying causes of Jean's problem are of a particular interest because they are so much a part of the traditional past of Jean's parents that have created in them the great emotional needs and conflicts which are the basis of Jean's own difficulty. She is an unwanted child, a girl, when both parents preferred a son, born into a family which is bound by strict religious , economic and moral traditions where life has consisted of little else than hard work and drudgery. The mother and father have taken on the attitude of authority and superiority from their own parents, and out of their own needs as well, and expect their children to conform to the pattern laid down for them. The pattern selected for Jean is one of a 'perfect lady'. Jean assumes attitudes of dominance, superiority, and authority, which results in severe conflicts not only with her parents, but with her playmates, her brother, and her teacher at school." [1]

An evaluation of these techniques, used as attitude indicators will be given in the summary at the end of this chapter.

b. The Oral Interview.

The oral interview as a means of determining attitudes hardly calls for separate consideration because it is so closely linked with life history materials. Yet it can be said that the interview calls for more objective factual data; than a

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1 Watson, Maud E., Children and Their Parents, p. 346.

biographical account can yield; while it is on a par with the objective data desired in scientific case history study. In the interview certain schedules of questions are filled out by a more or less skilled field worker who either records the data from direct observation, or gets it first hand from the interview.

The following excerpt was the result of a study made by the oral interview method. This data was recorded on the schedule by a field worker.

The illustration presents some of the attitudes of boys in a local area to a variety of social values. The boy, who was interviewed, gave specific statements as to what his gang thought about certain social issues.

> "Most boys in my community believe that:
> 1. To become intoxicated denotes manliness.
> 2. All judges, lawyers, and politicians are crooked.
> 3. Icemen, policemen, priests, scatter their offspring all over the neighborhood.
> 4. College is a place where one plays football and baseball all day and makes 'Whoopee!' at wet hot parties all night (The interviewer asked the boy where he got this idea and the boy replied "from the movies".)
> 5. A big time bootlegger is just another successful business man."[1]

This technique brings out rather specifically, at least in this situation, the attitudes of the subject interviewed.

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1 Young, Kimball, editor Social Attitudes, p. 261, quoted from F. M. Thrasher's article: "Social Attitudes of Boys."

This type of technique is being developed to its highest form at the present time and is used extensively by psychiatrists and psychoanalysts.

c. The Objective Attitude Tests.

The most objective attempts at determining and measuring attitudes have taken the form of questionnaires, rating and ranking tests, and scales of various types. The following objective attitude tests present the different types of measuring techniques that are used at the present time for attitude indicators. The number of detailed variations within each of these techniques are almost as numerous as the studies themselves. They may be classified according to the method of construction, the method of answering called for, and the technique of scoring or generalizing the results.

The following tests will be described and evaluated according to the plan of study and criteria set forth at the beginning of this discussion.

(1)

The Study: Social Beliefs and Attitudes of American Educators by Manly H. Harper.

The experimental study was published at the Bureau of Publications, Teachers College, Columbia University, New York City, 1927. Copies of the test which is called "A Social Study" can be secured at the Bureau of Publications. No duplicate form.

Range: College level and above.

Purpose: The purpose of the test was:

(1) to study in American educators the status of certain fundamental social beliefs and attitudes as included in the trait conservatism-liberalism-radicalism, and

(2) to develop a conveniently practical scale for further use in the measurement and study of this trait in relation to some of the more urgent aspects of unsolved problems.

Nature of the Study: This study is based on agreement-disagreement test formulated in accordance with the above purpose and used in testing nearly three thousand educators in various sections of the United States.

Underlying beliefs and attitudes as involved in the cleavage between conservatism and non-conservatism and as measured by the test are summarized in the opposition between scientific attitude, freedom, and regard for individuality on the one hand, and traditional institutions and the supremacy of general law as emphasized on the other.

The following illustration gives a general view of the test:

A Social Study.

Directions:

If you agree with a proposition more fully than you disagree, mark it by placing a plus sign (+) in the parenthesis at the left of the number.

If you disagree more fully than you agree, mark the proposition by placing a minus sign (-) in the parenthesis at the left of the number.

Please mark each proposition even if in some cases you feel that you are merely guessing.

The Propositions.

( ) 1. In teaching the vital problems of citizenship, teachers should so impress on the students the approved opinions in these matters that life's later experiences can never unsettle or modify the opinions given.

( ) 30. Our educational forces should be directed as efficiently as possible to the development of socialism.

( ) 52. We should attempt to give students in public schools an abiding faith in the Constitution of the United States in all its parts and principles.

( ) 71. The life and work of the school cannot properly be like the activities of life outside of school because the school has its own work to do in preparing the young for later life.

In this test Harper has made an attempt to measure Conservatism-Liberalism-Radicalism of American educators about various beliefs and public issues. Forty-one judges, doctors of philosophy, or highly selected educators nearing that degree, were asked to pass judgments on 71 statements regarding the conservatism and radicalism of the statements. Picture a scale[1] of social beliefs and attitudes extending from the extreme, C, through the point L to the opposite extreme, R, as shown below:

C		L		R
Extremely Conservative	Conservatism	Liberal	Radical	Extremely Radical

If the judge expected that a larger per cent of the conservatives than the radicals will agree with the statement, he marked it with a "C". If he expected that a larger per cent of radicals will agree with the statement, he marked it with an "R". Twenty-five statements were marked by an "R", the rest by a "C.

This type of test makes it possible to test the individual on a wide range of reactions in a brief period of time. For this test of seventy-one propositions, thirty minutes has proven to be ample time to give it, or forty minutes, if

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1 From Harper's study "Social Beliefs and Attitudes of American Educators", p. 38.

request is made for the extra time. This type of test renders rapidity of scoring possible. Not over two minutes are needed to score an individual's test, or to score any large number if they are checked by the ones tested in response to an oral rendering of the keymarks.

Ample directions are given for the taking of this test. Each subject is definitely told how to mark the propositions. A personal data section is presented, this may or may not be used. That depends on the director of the test. The tester is given a scoring key which aids the rapidity of determining the score.

The method of scoring adopted is that of one point for each proposition marked on the less conservative or non-conservative side. A smoothed distribution of the scores of 675, approximately, representative graduate educators gave the basis of total scores according to which the test was scaled. In developing the scale the zero point was arbitrarily placed 5 S.D. below the median of the scale distribution. A score interval represents .1 S.D. of the distribution of this aggregate. The higher the score the greater the extent of the individual's non-conservatism or liberalism in relation to the social problems involved.

Statistical and other analyses have shown that the higher the score, the greater the stability, the independence, the consistency, and the scientific attitude in thinking on issues such as those included in the study.

The following is a list of norms for educators:

More advanced negro educators of the South 39
Educators having not more than 4 years of education above 8 grade.....41
Educators having 4 to 7 years of education above 8 grade.....43
Educators holding a Bachelor's degree only - South.....44
Educators holding a Bachelor's degree only - Middle - Far West.....48
Graduate educators in general.....50
Graduate educators after the completion of certain studies.....68

The validity of the scale is attested:[1]

(1) by common understanding;
(2) by the relative position on the scale of certain classes of educators tested;
(3) by the inherent and obvious relation of the test to the characterization of the conservative-progressive cleavage as described by outstanding students of social problems;
(4) by the correlation of scores made on the test with median judgments as to conservatism - liberalism - radicalism passed on each other by members of certain groups tested;
(5) and by the striking agreement of an average of over 98 per cent among competent judges passing on the cleavage in question in the case of each proposition.

The validity of the scoring key for scoring inconsistency is verified by an agreement of 75 per cent or higher on the part of

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1 Harper, M. H. "Social Beliefs and Attitudes of American Education", p. 40.

competent judges passing on the relative consistency of marking certain pairs of propositions. The more questionable and subtle inconsistencies are not taken account of in the key.

The testing was done under competent supervision and according to careful directions. The data obtained bore the marks of care and sincerity. In the case of three different selections of educators, correlations of scores on alternative halves of the test gave coefficients sufficiently high to indicate reasonably adequate reliability of the data for the purposes of study. A retest showed the scale to possess high reliability, unusually high reliability in view of the convenient and practical brevity of time required for the giving and for the scoring of the test.

The reliability of the test in statistical terms is as follows: Correlations between scores on halves of the test are .75, .78 and .81 for three different groups. Correlation between scores obtained from the test given for the first time and scores obtained from the test given three weeks later was found to be .90. To obtain a check on the inconsistency of marking the statements, 29 judges were asked to pass judgments upon the consistency of marking 30 groups of statements. If the first statement in a group was marked with a plus sign the judge

was instructed to mark the other statements in the group with a sign consistent with the first mark. The score of inconsistency was the number of statements marked according to the finding of the judges, plus one-third of that number, added to correct for the average number of inconsistencies avoidable through guessing.

Results of the Study:

Nearly 3000 educators were tested. Their scores ranged on a scale from 17 to 78, For the various groups and aggregates tested, the median scores were found to range from 37 to 68. Differences in sex, in ages, among those tested, in membership in the more prominent religious denominations or in preference between the major political parties were found to have but little or no relation to scores. On the other hand, as a rule,, the greater the stability, the greater the independence; the greater the consistency, the greater the scientific attitude in thinking on the fundamental conceptions and issues of the test, the higher were found to be the scores. In other words, the greater the pertinent resources of information, understanding, and attitudes adapted to reflective reaction to the problems involved in the test, the higher was found to be the position in non-conservatism.

While Harper found no correlation of radicalism-conservatism with age, sex, religious dominations or political party, he found that radicalism was increased two intervals per year in undergraduate education, four intervals per year in graduate education, and fourteen intervals by a special course in social conceptions and issues.

Evaluation:

This test fulfilled its purpose, first of all because it set forth the status of certain fundamental social beliefs and attitudes of American educators, and secondly, because it set forth a scale for the future use in measurement of such traits. This test is in harmony with good school practices of the present time. It presents a measuring scale to indicate conservatism and radicalism of an individual. It seems as though this test would be of great value in disclosing status, and change in status in social beliefs and attitudes of individuals, groups, and aggregates among educators in service, and among educators, and prospective educators in attendance at schools of education. As to position on the scale and changes produced in such position it would be of interest to have the comparison of one school of education with that of another school of education; of one course in a curriculum with that of another course; of one student pursuing the course with that of other students pursuing the same courses.

Particular interest might attach, it would seem, to changes made in social beliefs and attitudes through courses such as those in history, other social studies, certain types of literature, philosophy of education, and principles of education. Harper suggests that this test could be used in school systems because it might prove of helpful stimulus to disclose comparison in status or in change achieved in status between the teaching corps of one system and the teaching corps of another system; between the faculty of one school, and the faculty of another school of the same system, between the position of one teacher and that of the other teachers of the same school.[1]

According to Harper this type of test[2] "agreement-disagreement" has a number of advantages:

> (1) It is possible to test the individual on a wide range of reactions in a brief time.
> (2) It is easy to score.
> (3) This form of response is characteristic of the necessities of choice and action in the common alternatives that life situations constantly offer. Harper gives an illustration of this "for example, people are commonly judged largely by the manner in which they meet certain proposed alternatives. This man agrees with the proposed constitutional amendment and votes for it. He disagrees with this nominee's platform to the extent that it causes him to vote for the other man in preference."(3) Life is largely a series of such reactions, a series of moving toward or moving away from phases of environment through some measure of assent or of dissent.

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1 Harper suggests some excellent uses of this test in the final chapter of his book, pp. 76-91.
2 Harper p. 28.
3 Harper p. 29.

Objections can be offered that this agreement-disagreement form offers no middle ground, and also that this test offers no means of obtaining an individual's degree of agreement or of disagreement in the case of a particular proposition.

The definition of attitude which Harper subscribes to is that of "opinion" or "beliefs". From the results obtained in the study, it can be said that Harper has measured the opinions of American educators toward radicalism or conservatism.

(2)
The Study: A Study of International Attitudes of High School Students. George B. Neumann.

This experimental study was published by the Bureau of Publications, Teachers College, Columbia University, New York City, 1926. Copies of the test can be obtained at the Bureau of Publications. No duplicate form available.

Range: Senior high school. Students of the twelfth year.

Purpose: The purpose of this test was to discover the direction in which high school students' attitudes, so far as they are concerned with international matters, tend to move, and to learn in an objective way of something of the strength of attitudes.

Nature of the Study: Neumann collected from authoritative books, statements relating to each of twelve issues: racialism, nationalism, imperialism, militarism, economic prosperity, proletarist cooperation for the establishment of a world state, public opinion, rights of other nations and peoples, international cooperation, international good will, and humanitarianism. The present study did not undertake to invent new techniques, to measure these twelve issues, but the study planned to make use of certain techniques which already had been found satisfactory. The tool used in this study was called an indicator. Certain principles guided the selection of the techniques used in this study. One principle was that in view of the variety of classifications of attitudes to be studied, as named above, an effort should be made to secure maximum expressions from the students in the time allotted.

In the first part of the questionnaire a modification of Hart's method was applied. First, all statements with which the subject did not agree were marked by a minus sign. Statements with which he agreed were marked by a plus sign. Ambiguous statements or statements which he did not know anything about were marked by a question mark. Then he went over the list of statements again and underlined those with which he agreed or disagreed the most strongly of all.

In the second part of the questionnaire each statement was marked by either one of the five answers: R-, R, ?, W, and W-.

The interest of the students in marking the indicator was found to be very real, but as an aid to still further interest the indicator was divided into four sections, each differing in arrangement from the others. The first section made use of the Hart method:

A Study of International Attitudes.

Section A.

Directions:

Draw a circle around the sumbol in front of each item which best indicates the way you feel about that item, as follows:

⊕ ? — If you have a feeling in favor of the statement draw a circle around the plus line.

+ ⓘ — If you are quite uncertain as to how you feel draw a circle around the question mark.

+ ? ⊖ If you have a feeling against the statement draw a circle around the minus sign.

Be sure to mark every item. Omit none.

1.) + ? — The United States is superior to all other nations in such important respects as a government, educational opportunities, family life, and morals.

5.) + ? — Military preparedness is one of the best ways to prevent war.

13.) + ? — We have no right to insist that China any longer retain those treaties which were forced upon her by foreign powers, even though it will injure American tradd interests if the treaties are revised.

Further Directions:

1. Go over the above list of items a second time and underscore the circles in front of those items about which you have a very strong feeling, if there are any such, thus ⊕ or ⊖

2. Now go over your underscored items and doubly underscore one of two items about which you feel most strongly of all, if there are any such, thus ⊕ or ⊖

The second section is planned similar to a multiple choice test in form so that one topic is treated from several points of view. The five point system was used for the marking of the items. The student is thus helped to understand all the items in the group because they are related to a common issue.

Section B.

Directions:

Below are listed various international situations with several statements regarding each one. Draw a circle around the letter or question mark which best indicates the way you feel about each statement, as follows:

R+ (R) ? W W- If you have a feeling in favor of the statement, draw a circle around R.

(R+) R ? W W- If you have a very strong feeling in favor of the statement, draw a circle around R+.

R+ R ? W (W-) If you have a very strong feeling against the statement, draw a circle around W-.

R+ R ? (W) W- If you have a feeling against the statement, draw a circle around W.

R+ R (?) W W- If you are quite uncertain as to how you do feel, draw a circle around the ?.

Be sure to mark every item. Omit none. Remember to put an x before any item you do not understand.

I. The American people ought to help other peoples in times of special suffering, such as times of earthquake and famine -

1. R+ R ? W W- because the resultant kindly feeling will foster a development of our international trade.
2. R+ R ? W W- so that we may thus establish a good reputation for America.
3. R+ R ? W W- because cooperation is the best policy in international relationships.
4. R+ R ? W W- simply because we get satisfaction from helping others.

V. If the European powers and Japan wish to retain their possessions among weaker peoples or to increase such possessions -

15. R+ R ? W W- it is none of our business.
16. R+ R ? W W- we should urge other nations to allow these weaker peoples to determine their own future.
17. R+ R ? W W- we should not criticize them because we would like our own country to increase or at least maintain its present possessions among such weaker peoples.

The third section is arranged in a similar way, but the character of the items is such as to permit brief, concise statements and naturally called out expressions of definite, easily distinguishable responses.

Section C.

Directions: same as in Section B.

I. The people of the white race are born mentally superior to the other races such as -

1. R+ R ? W W- the yellow peoples of China and Japan.
2. R+ R ? W W- the black peoples of Africa.
3. R+ R ? W W- the North American Indians.
4. R+ R ? W W- the peoples of India.

III. The United States should join the League of Nations -

8. R+ R ? W W- in the immediate future.
9. R+ R ? W W- only when the League has shown much more clearly its value for us.
10. R+ R ? W W- never.

The fourth section resembles the first in character of the items, but the five point method is used as the marking system.

Section D.

Directions: same as in Sections B. and C.

1. R+ R ? W W- The United States has not always treated small nations justly.

13. R+ R ? W W- We should not allow Communists openly to advocate their policies here in the United States, because they might succeed in destroying American institutions and in establishing a World State.

21. R+ R ? W W- During war, it is patriotic to emphasize the bad facts about our enemies and to keep silent about their good qualities.

37. R+ R ? W W- Weak or backward nations or peoples are so because they were born with poor brains.

This test is rather lengthy on account of all the reading material. 45 to 50 minutes is the time required to take this test. The difference in the marking method in the second section from that used in the first provides a change: the short, rapid fire character of the third section is a relief after the longer and harder items of the second, and prepares the way for the more monotonous fourth section. Neumann found that the morale of his students tested remained rather high throughout the lengthy test.

The text covers an enormous amount of material in the time necessary to take the test. A wide range of reactions are tested.

The x placed before any item might indicate the subject matter which was not familiar, or might indicate the inability to understand the meaning of the item.

The directions given for the taking of this test are adequate, concise, and concrete. Illustrations are presented which show exactly how to mark the test.

A preliminary paragraph is inserted at the beginning of the attitude indicator which explains to the student the general purpose of the indicator. A personal data blank is offered at the end of the test.

The scoring method used is based on a range from 8 to 0 for Section A - that is where the Hart method is used - and from 6 to 2 for the remainder of the sections. It appeared that the extremes marked according to the Hart method called for a greater difference than simply a unit for the directions called for but one or two items out of the twenty-three to be marked in this extreme way. For the other items, the score differs by a single unit in each case. The method used may be readily understood from the following key:

Marks in Section A:	⊕	⊕	⊕	?	⊖	⊖	⊖
Marks in Other Sections	=	R+	R	?	W	W-	=
Scores used for marks:	8	6	5	4	3	2	0
Interpretation:	Very strongly favorable			Neutral			Very strongly unfavorable

As will be noted, 4 represents the question mark and means uncertainty of feeling on the part of those marking the items. The interpretation of these scores are as follows:

Very strongly favorable	value 8
Strongly favorable	value 6
Favorable	value 5
Undecided neutral	value 4
Unfavorable	value 3
Strongly unfavorable	value 2
Very strongly unfavorable	value 0

The order of the items involved in each issue of the test had been determined by the means of the responses, ranging from the item on which was the most emphatic approval to that on which there was the most emphatic disapproval.

For example, the distribution of the attitudes of approximately the 1100 high school students towards the item "Nationalism" which contained 26 statements, will be given in terms of the above scale. The statement most strongly opposed had a mean scale value of 2.44 and a standard deviation of 0.63, and read as follows:

> "Great Britain oppressed our ancestors and so we ought always to hate her."

The statement most favorably received had a mean scale value of 5.19, a standard deviation of 1.89, and read as follows:

> "We should exclude from the United States those who wish to establish a Communist government here."

A statement near the middle of the scale with a scale value of 4.07 and with a standard deviation of 1.27, was as follows:

> "The decision of the United States in regard to the League of Nations should be that we remain outside of it because the benefits which we as a nation would get by joining are not at all in proportion to the responsibilities which we would have to assume."

The norms for the test are as follows:

1. Public small town high school seniors 113
2. Public city high school seniors 356
3. Private school seniors 65
4. Seniors 131, juniors 84, and sophomores 29, attending Friends school.

Neumann presents a table in the appendix of his book showing means of responses made by each group studied; their sigma position with reference to the norm; that is, the mean of the means of the groups for each item on the indicator.

The norm mean for question 1 of Section A of the Attitude Indicator is 5.10. The mean for the South Manchester group is 6.00 with a sigma position of 1.67. Only fifteen means entered into the norm of this study, but the importance of this difference in terms of sigma can be seen by consulting statistical tables which show that if there had been 10,000 items entering into the norm instead of 15, such a difference from the norm, either above or below it, as shown in this particular instance would have accured only 950 times in the 10,000 items.

In regards to the validity of the test, the students were asked to express themselves on the matter by underlining one of five phrases printed on the back page of the indicator,

showing in this way how accurately they felt their mark on the indicator expressed their real attitudes. The following data were tabulated as the result of 912 replies.[1]

Underlined "very accurately"	12.6%
Underlined "fairly accurately"	63.7
Underlined "only moderately well"	19.5
Underlined "rather inaccurately"	3.6
Underlined "very inaccurately"	.6

Only 4.2 per cent felt, as they finished the indicator that they had been rather or very inaccurate in their marks.

Another much more reliable criterion for judging the validity of the students' marks on the indicator was the consistency of their expressions. For example when the factor nationalism was associated with any other factor in the items, its influence was consistently evident. Similarly, the student's tendency to keep away from imperialism was consistent throughout the indicator.

The indicator was constructed for high school students of the twelfth year, not for adults, yet for the purpose of examining the validity. Various types of adults were asked to mark its items. In one case a friend was asked to record his reactions to the items with the utmost frankness, and he declared on returning the indicator that he had done so. He was then asked to give indicators to three people who knew him

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1 Neumann, A Study of International Attitudes, p. 84.

well enough to know his attitudes sufficiently well to enable them to judge how he marked his copy. No attention was paid to the strengths of the responses but simply to the direction of the attitudes and when his own tendencies as he had recorded them, were compared with the conceptions his friends had of his tendencies, it was found that there was perfect agreement in 74 per cent of the 109 items of the indicator.

A second procedure involving the marking of the indicator by adults was used. A number of Army officers, a number of declared pacifists, a number from the Stock Exchange on Wall Street, students at the Brookwood Labor College, members of the I. W. W., members of the Universal Negro Improvement Association, and two Communists were asked to fill out the indicators. Consistent replies were received from each group. For example, the Pacifists, Communists, Labor students, and I. W. W.'s were unanimously in favor of the recognition of Soviet Russia; while the Wall Street and Army groups were unanimously opposed to it.

Thus these illustrative methods show the existences of validity in this test of attitude.

The reliability of the test in statistical terms is as follows:

(1) Using the split halves method, on 346 high school seniors, the coefficients range from .77 to .89.

(2) Applying the Spearman-Brown formula on 380 high school seniors, after an eight month interval, the coefficients were found to range from .62 to .82.

Results of the Study:

It was discovered that high school students as a group were quite conservative. They had definite tendencies in one direction or another, but moderate in their expression. It should be added, in regard to many international matters, that high school students had definite strong and rigorous tendencies.

It is also of interest to note on what items[1] these students responded with strong attitudes, both favorable and opposed to the statements made and on what items there is a marked indifference. Beginning first with the items receiving the strongest expressions of approval, we notice that item C6 (Section C of the test and question number 6), which states that we should give the Filipinos their independence when they prove to our government that they are able to govern themselves, is the utmost extreme. According to the classifications of the complexes, this item was considred expressive of both a tendency against imperialism, and a tendency to recognize the rights of others.

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1 Neumann made an excellent analysis on all the items included in this test. See pp. 42-77.

The next item D9, with a score nearly as high, recognizes the worth of others according to the adopted classification, stating that other people's ways are often quite as good as ours and appear queer and ridiculous simply because of our unfamiliarity with them. The item occupying the third place, B3, declares that cooperation is the best policy in international relations.

Turning next to the items at the other end of the table, it is instructive to note that most of all, they shrink from international hate, at least as expressed toward Great Britain on the basis of expression by that nation of our ancestors (D23). The next item, C7, expresses their strong tendency away from imperialism and toward the recognition of the rights of others so far as these attitudes are expressed in their vigorous vote against the suggestion that the Filipinos never be given their independence. The third most vigorous opposition was shown to item D16, which states that in view of the unimportance of international relations of the United States, it is not necessary that high school students should study much about other conditions.

It is likewise instructive to study the items about which they show indecision. For example. they do not have any tendency whatever in regard to item B28, which states that we should stand back of American investors in Mexico in views of our

increasing oil supply.

It is interesting to note that only 12 per cent of all the responses took the form of uncertainty indicated by encircling the question mark. The responses made by encircling the symbols on each side of the question mark, therefore, representing attitudes of moderate strength, together constitute 60.7 per cent of the total. This leaves 26.8 per cent for the extreme position and 0.5 per cent for the items which were marked as not being understood. These facts further give strength to the statement made above that the high school students studied in this investigation do have definite attitudes on matters regarding international relations; that they have a tendency usually to express themselves moderatly but to a certain extent they are prepared to express very strong attitudes.

Evaluation:

This test of Neumann's measures what it purports to measure, that is, to discover the direction in which high school students' attitudes tend to move, in regard to international matters. Evidences of this are presented in results of the study.

This study is of importance to educational progress because the very nature of the test can set forth the direction of the students' attitudes toward international matters. This test should

be of great importance to teachers of the public schools.

In the first place, teachers appear to have been primarily concerned with the passing on of information and development of certain skills, but it appears that teachers have not been aware of the fact that their students have been developing certain attitudes and actions, tendencies not primarily because of facts which have been imparted to them but because of a large variety of influences exerted upon them. The teachers have hoped that the information and skills which have been passed on by them would result in desirable attitudes and conduct on the part of the students taught, but educators have not developed tests for attitudes until quite recently. There are many calls for the supply of instruments by which it can be learned what are the attitudes resulting from the total educational experiences of students. This study began with the construction of such an instrument for use in discovering attitudes of twelfth year students in the field of international relations. It has ended with supplying data which, within the limits necessary for the study, do indicate trends and tendencies of high school students in regard to international matters.

This study was a very contributive piece of work

to education because Neumann discovered that high school students have many clearly defined international attitudes. A wide variety of issues was raised in the items of the indicator and responses to these items led to natural expression of attitudes. Neumann found another important value concerning the nature of attitude. He discovered that

"attitudes are tendencies to move toward or away from values and as such can be checked or stimulated by changing the appreciation of the values, increasing or decreasing such appreciations. The results of this study show toward what objectives the students tend to move considering them as values and at the same time what the negative values are from which they tend to move away."1

It was stated in the description of the test that two techniques were used in this study; first, a modification of the Hart method; and second, a degree of strength or five point method. The description of these two methods have already been given. An evaluation will be all that is needed. Both of these techniques for the measurement of attitude measured more than just a mere "yes"- or "no" degree of attitude. They measured the intensity of the attitude held by a particular student. The Hart method allowed for three degrees of strength in each direction, while the five point method, or degree of strength allowed two degrees of strength in each direction. In the Hart method, the comparison of strengths is between the

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1 Neumann's (Study) p. 91.
A Study of International Attitudes of High School Students.

items, for those items are to be selected out of the entire list about which the strongest feeling is experienced. In the five point method, the question before the student is confined to one item at a time, and he must decide in regard to the single item as to whether his feeling on that item is very strong or simply one favoring or opposing it. Under these conditions, five points on the scale is presumably all that the high school student can be asked to consider and between which it appears he can readily distinguish. This process can be used rather rapidly and therefore more items can be marked than if the Hart method were used.

(3)

The Study: The Composition of Political Attitudes.
G. W. Allport.

This experimental study was published in the American Journal of Sociology, September 1929, Volume XXXV, by the University of Chicago Press, Chicago, Illinois.

Range: College level and above.

Purpose: The specific questions for the study were three[1]:

(1) What differentiating factors are there in the personalities of voters that might be regarded as constituting determinants for political opinion and political behavior?

(2) What practical consequences for political science might be deduced from such discoveries as the study makes regarding the constitution of political nature?

(3) What light can the method employed throw upon the troublesome problem of the nature of attitudes?

Nature of the Study: A Questionnaire of seven pages was given to 305 students of elementary psychology in Dartmouth College one month prior to the presidential election of 1928.

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1 Allport, G. W. "The Composition of Political Attitudes," American Journal of Sociology, p. 220.

The questions included a large number of items planned to reveal information regarding the radical-conservative attitude of the student, his knowledge of the issues of the campaign, and his prejudices, along with miscellaneous items regarding his choice of candidate, his religious affiliation, his father's political preference, and the like. Samples of the chief types of questions are given below:

To detect the radical-conservative attitude:

State ownership of public utilities. (Check the opinion with which you are most in sympathy, whether or not it expresses your exact views.)

Not so much public ownership as at present should be practiced _____

No more public ownership as at present should be practiced _____

The government should control at least the major power of the country like Muscle Shoals and Boulder Dam _____

To determine amount of information and misinformation possessed:

Mark the statements T or F according to your judgment of them as true or false.

Boulder Dam generates power which for the time being is distributed by the government _____

Smith's expressed attitude toward the liquor traffic favors the right of each state to determine its own prohibition or license _____

Hoover suggests inland waterways as one of the solutions of the farming problems _____

To detect prejudice:

(Indicate your personal view by checking the statement that most nearly expresses your opinion.)

The cultural background of Smith and his family disqualifies him for presidency

complete agreement _____
slight agreement _____
disagreement _____

Hoover is too stodgy, too much of a "Mrs. Grundy in pants" to qualify as president of the nation.

complete agreement _____
slight agreement _____
disagreement _____

The fact that Thomas was a minister before he resigned to take up Socialist agitation should add to his disqualifications

complete agreement _____
slight agreement _____
disagreement _____

Twenty-five professors of social science independently gave their judgments as to the significance of the items employed. They rated the questions planned to reveal radical-conservatism according to the degree of the attitude each answer betrayed (1 most radical, 4 most conservative). In using this scale there was virtually no disagreement among the judges on the relative position of the items. The questions of information were either "right or "wrong", since each proposition stood for a definite ascertainable fact in the campaign.

A method of scoring was secured through these twenty-five professors who rated the prejudice items on a scale of 0, 1, 2, indicating no prejudice, slight prejudice, or considerable prejudice, respectfully. The prejudice score for an answer was the average of the twenty-five judgments for the answer in the question. The administration of the test consists of checking that statement with which the subject is in most sympathy. For the purpose of scoring, each statement of attitude was assigned a value of 6 so that the range of scores is from 6 to 24. The individual score is the average of all the checked statements.

Results of the Study:

This study is offered in support of the contention that attitudes can be measured, and that under suitable conditions, the questionnaire affords a relatively satisfactory method of procedure. The political preferences, information, prejudices, and convictions of 375 undergraduates were studied. By methods of correlation and of comparing extreme groups in respect to scholarship, prejudice, and radicalism, the existence of types is discovered. The most prominent types are those showingradicalism with high scholarship and low prejudice and

conservatism with low scholarship and high prejudice. Those who feel strongly on political matters, the Catholics, the Jews, and those who differ in vote from their fathers also show distinctive political and personal qualities. The study discovers the hierarchy of prejudice for the group as a whole; the leading bias is antisocialistic. Several practical conclusions for politics are offered. The principal theoretical conclusion is that political behavior is not specific, but is related to inclusive sets or attitudes in personality. The political character of men is, on the whole bound up with many generic traits in their personalities.

Some of the outstanding results of the test are as follows:[1]

1. Radicals showed less prejudice than the group as a whole, and decidedly less than the conservatives.

2. Radicals had more information and less misinformation than the conservatives, or the group, as a whole.

3. Radicals were superior in college grades.

4. Radicals were 69% Protestant; the group 79%; and the conservatives 98%. Conservatives displayed greater consistency in acting with their convictions. All who voted, or 98%, voted

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1 Tenth Year Book, 1932. pp. 153-154. Department of Superintendence.

for recognized candidate. Radicals were not so consistent. Nearly one-half did not vote for liberal candidate, but they were consistent in carrying their radicalism into domestic, religious, and scholastic questions.

5. Radicals showed less tendency to be influenced by father's vote than the others. They showed 47%; the group79%; conservatives 98%.

6. More than 50% of the anti-socialists showed lack of knowledge of the socialist platform.

7. In judging the issues of the campaign, nearly all of the students considered religion a negligible factor, yet only 7% of the Catholics were for the Protestant candidate.

8. Jews were lowest in prejudice score and relatively radical.

Evaluation:

Allport set up three objectives for the study. First, the differentiating factors in the personality of voters that might be regarded as constituting determinants for political behavior and opinion. This objective was fulfilled because it was discovered that:

(1) Political radicals (compared with conservatives)

are less prejudiced
have higher college grades
have less misinformation
disagree with father's vote
possess a certain distinctive aggressiveness

(2) Political conservatives (compared with radicals)

have reverse of the relationships listed in the foregoing

(3) High-scholarship men (compared with low scholarship men)

are more radical politically
are less prejudiced
have less misinformation

(4) Low scholarship men (compared with high scholarship men)

have reverse of the relationships listed in the foregoing

(5) Low prejudice group (compared with high prejudiced group)

are more radical politically
have more correct political information
have higher college grades
vote more liberally

(6) High prejudice group (compared with low prejudice group)

The second objective was the practical consequences for political science that would be discovered. Consider the following discoveries:

(1) The superiority of the radical in intellectual outlook is one of the most interesting results of the study.

(2) The striking homogeneity of the votes of conservatives and the heterogeneity of the votes of the radicals suggest an important problem in national elections.

(3) Religious considerations denied as an issue in the campaign.

(4) Many prejudices are obviously based on misinformation, especially the anti-Socialist prejudice.

(5) Conservatives are more prejudiced than radicals.

The third objective was to discover something of the nature of attitudes in political behavior. It was discovered that political behavior was not specific, but general. The large number of statistically reliable differentiations obtained in respect to several measurements offered evidence that political behavior and character of the men in certain extreme groups were bound up with many generic traits in their personalities.

Allport proposes the view that the political nature of man is indistinguishable from his personality as a whole, and that his personality as a whole is not the sum-total of his specific reactions, but rather a congruent system of attitudes, each element of which is intelligible only in the light of the total pattern. A man's political opinions reflect the characteristic modes of his adjustment to life.

This study of the political attitudes was an important contribution to education because of the outstanding results that have been interpreted. This particular test cannot be used now because the material was especially prepared at the time of the

1928 election. This study was more on the investigation type. The validity of the test depended on the judgments of the twenty-five professors who rated the questions according to the degree of attitude revealed in conservatism and radicalism. No available statistics of the reliability of the test were obtained.

While this test is based on the agreement disagreement basis there are three ways of marking these agreements and disagreements. In the first part of the test four statements are presented in answer to one problem. In this instance the subject checks the statement he most heartily agrees with. The second part of the test presents a number of true-false questions, and the subject marks the questions true or false according to his judgment. The third part of the test presents a problem with three possible answers; complete agreement, slight agreement, and disagreement, and the subject checks the statement that expresses his opinion.

In this type of test it is possible to test a large number of reactions and it is also easy to score. The test affords a variance in marking or checking the situations. While no middle ground is offered by the majority of test situation, there, is an opportunity to check a "slight agreement"

which is near the neutral, or middle ground position. The test does not measure the intensity of agreement or disagreement which is a vital and necessary element in measuring attitudes.

In the beginning of the study Allport sets up a temporary definition of attitude, one that agrees with the results of his study. He says "that an attitude is a disposition to act which is built up by the integration of numerous specific responses of a similar type, but which exists as a general neural set, and when activated by a specific stimulus results in behavior that is more obvicusly a function of the disposition than of the activating stimulus."[1]

The important thing to note about this definition is that it considers attitudes as broad, generic (not simple and specific) determinants of behavior. The results of the present study are offered as evidence for this view which states, in brief, that the dispositions affecting a man's vote affect also much else in his behavior and exist not as mere colligations of specific habits, but as generic and internally consistent trends in personality.

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1 Allport, p. 221. "The Composition of Political Attitudes," American Journal of Sociology,

(4)

The Study: A Test of Social Attitudes and Interests", Hornell N. Hart.

This study was published by the University of Iowa, from their studies in Child Welfare, Volume II, Number 4. University of Iowa Press. 1923.

Range: Adult ages - approximately 20 to 40.

Purpose: The purpose of the experiment was to develop a reliable instrument for measuring the socialization of various groups of individuals, and if possible, of individuals themselves.

Nature of the Study: This test of Hart's combines selection with ranking. His major purpose was to measure relative socialization of two groups: one composed of "leaders of social progress", thirty three in number; the other a heterogeneous group of thieves, business men, junior "medics", and college students, one hundred and fifty four in number. He used the responses of the "leaders" to validate the concept of socialization. In this way he was able to compare the reactions of the highly socialized group with the less socialized group.

The test known as Form D is illustrated by the following examples:

Chart 2.

Likes and Dislikes: Lists 1 to 4 contain things which people like or dislike to be, to do, or to have happen. Mark the things that you specially like ⊕, or dislike ⊖, or that you think you would like or dislike if you had a chance. Draw a line under each of the five things that you like ⊕ or dislike ⊖ most in each list, and draw a double line under one of the five that you feel most strongly about in each list.

List 1

Be lonely	+	-
Play in an orchestra	+	-
Help a friend	+	-

List 2

Have an operation	+	-
Discover truth	+	-
Work for social justice	+	-

List 3

Explore strange country	+	-
Succeed in business	+	-
Smoking by women	+	-

List 4

Move away from friends	+	-
Be a leader	+	-
Do research work	+	-

Chart 3.

Things to Read or to Study: Mark lists 5 and 6 like the other lists.

List 5

Baseball news	+	-
Ladies Home Journal	+	-
The classics	+	-

List 6

How to train children	+	-
Editorials	+	-
The Bible	+	-

Reforms: Mark lists 7 and 8 like the other lists, putting a circle around the plus sign ⊕ after things you favor, and around the minus sign ⊖ after things you are against. Underline five items and double underline one in each list, as before.

List 7

Make divorce harder	+	-
Hatred between nations	+	-
Repress gambling v	+	-

List 8

Social justice for negroes	+	-
More faith in God	+	-
World disarmament	+	-

Chart 4.

Truths and Untruths: Mark this list like the others, putting a circle around the plus sign ⊕ after the sentences that you feel are true, and around the minus sign ⊖ after the sentences which you feel are untrue. Underline the five most important truths or dangerous falsehoods, and double underline the most important one of all.

Large fortunes have been made only by honesty, brains and hard work	+	-
"Our Country right or wrong" is a noble sentiment	+	-
All strikes should be prohibited	+	-

The stimuli in Form D are arranged in nine lists[1] containing from 15 to 19 stimuli each. To each stimulus seven different reactions are possible. The reaction referred to as "the strongest positive reaction (⊕) indicates that the stimulus is asserted by the individual to be pleasant to him or approved of by him, or true according to his opinion and that his reaction to that stimulus is the strong reaction provoked by any stimulus in the list in which the stimulus in question occurs.

The "strong positive" reaction (⊕) indicates the same sort of feeling as the preceding type, except that the reaction is designated as one of the five strongest, but not the strongest one in the list. The "somewhat positive" reaction (⊕) indicates that the stimulus is asserted by the individual to be pleasant to him, or approved of by him, or true according to his opinion, but that the reaction is not one of the five strongest in the list. The "zero reaction" (+ -) indicates that the individual is indifferent to the stimulus or cannot decide whether to react positively or negatively. The "somewhat negative" (⊖), "strong negative (⊖), and the "strongest negative" (⊖) reactions correspond to the positive reactions except that

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1 Hart, Hornell "A Test of Social Attitudes and Interests", pp. 17, 18.

the individual asserts that the stimulus is unpleasant and is disapproved of, or is considered untrue.

In order to illustrate the above reactions and to indicate the contrast between the reactions of socialized and unsocialized men, the following chart presents the statements found in List 7. Column one gives the statements, column two gives the checked reactions of the typical "leader of social progress", and column three gives the checked reactions of the typical "unsocialized person".

I THE STATEMENTS	II SOCIALIZED PERSON	III UNSOCIALIZED PERSON
Make divorce harder	⊖	⊕
More harmony with divine purpose		⊕
Soldiers to stop strikes	⊖	
Hatred between nations	⊖	⊖
More use of prayer		⊕
Collective bargaining	⊕	
A federation of the world	⊕	
Working class solidarity		
Milk and ice fund for babies	⊕	⊕
More honoring of parents by children	⊕	⊕
Abolition of capital punishment		
Better pay for school teachers	⊕	⊕
Fair treatment of colored people	⊕	⊕
Freer discussion of social and political questions	⊕	⊕
Repress gambling	⊕	

It is important to note that the "unsocialized person" considered the "milk and ice fund for babies" as the most important statement while the "socialized man" considered a

"federation of the world" as the most important. The "unsocialized man" is in favor of harder divorces, while the "socialized man" is not. The "unsocialized man" is in great favor of "more harmony with divine purpose", and "more use of prayer", while the "socialized man" failed to check either of these statements. Most of the other statements were checked the same by these two types of persons.

Hart attempted to discover the validity[1] of his test by determining the element of chance involved in the test. He discovered that if 33 leaders of social progress were a random sample from the universe like the 154 other men tested, the difference between the percentage of strong or strongest positive reactions in the two groups which would be exceeded by chance on the average once per 100 trials was about .18. The observed difference is .849 minus .195, or, 654. This is more than 3.6 times as large as the once per 100 trials error. The observed difference would occur by chance only once in a billion trials. Therefore chance may be dismissed. Even with only 33 and 154 cases involved, the observed results would not be fundamentally different even if an indefinite number of additional cases were collected under the conditions in the experiment described.

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1 Hart, Hornell pp. 30 to 37.
A Test of Social Attitudes and Interests.

Hart also pointed out that the differences in the treatment of the two groups had very little influence on the results obtained; that the contrasts of the two types of men had little affect on the differences in degrees or socialization; and that the test had considered the minimizing of the factors of insincerity and rationalization.

Results of the Study:

This investigation has demonstrated that the verbal stimuli contained in Form D of "The Test of Social Attitudes and Interests" provoke markedly differential reactions from a selected group of highly socialized men in comparison with a larger group of other men tested. Hart says:

> "The differences in reactions are such as to indicate that the men in the highly socialized group either are, or believe themselves to be, or think it desirable to appear, markedly more interested in international, economic, criminal, and social justice, far more interested in discovering truth and having it spread abroad freely, more interested in intellectual and ethical aspects of religion but less interested in creeds and farms, far less interested in conventionality and social approval, decidedly less sentimental and dominated by sympathy and immediate personal bonds, and much more indifferent to light reading, to certain aspects of personal comfort, to business success, and in general to trivial and selfish interests than the other men tested are, or believe themselves to be, or think it desirable to appear." [1]

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1 Hart, Hornell "A Test ofSocial Attitudes and Interests", pp. 37, 38.

Evaluation:

Hornell Hart did pioneer work in the use of the questionnaire in testing social attitudes and interests. The purpose of the test was to measure relative socialization of two groups, one, a highly socialized group, the other, a less socialized group. The test fulfilled its purpose to a fairly large degree. This was demonstrated in the preceding discussion.

The test is in harmony with certain educational principles. A research instrument that is fitted to discover objectively whether an increase in socialization can best be brought about by eugenic methods, by education of parents, by socialization of our school curricula, by social vitilization of the church, by certain types of recreation, or by other means, is of great importance to education.

A first step in the study of socialization must be the development of a means for measuring the degrees and autlities of socialization in different individuals. Therefore, Hart, set out to study and to analyze certain experimental data. He desired merely to demonstrate that reactions to certain stimuli were highly differential as between socialized and unsocialized individuals. The data discussed demonstrates

that this type of test has definite possibilities for diagnostic and research purposes for a study in socialization. This was demonstrated in the results obtained by the test.

It should be stated at this point that there is the possibility that factors other than degree of socialization such as amount of schooling or native ability may influence the results. Hart considers these factors in a slight way, but dismisses them. Even though Hart thinks significant differences appear in these data and has drawn some conclusions that are not fairly justifiable, he has used a technique which roughly indicates affect toward social symbols. By asking each subject to indicate not only what he most strongly approved of or disapproved of, but five others he strongly approved or disapproved of, he was able to distribute the attitudes of the group along a seven point continuum.

P. M. Symonds, in his recent book, states that Hart's method of indicating responses does not work entirely satisfactorily. He says "in using this procedure in school, one can never tell whether a pupil is omitting an item through carelessness or neglect, or because he is actually neutral to that item. Consequently, it is better to require that every item be answered and then give a neutral symbol which may be encircled

to indicate neutrality".[1] Another possible defect, says Symonds, is the limitation placed on the expression of extreme feeling by requiring that five items be underlined once, and one of these doubly underlined. Greater freedom of expression for the individual differences in feeling may be obtained by including symbols to be encircled for indicating degree of feeling.

Hart subscribed to the use of verbal response or opinion as the formulation of his concept of attitude. His test was built on a number of verbal symbols in which he tested the reactions of men by their verbal response to these situations. The results of his test demonstrate that he did produce a measuring instrument of opinions.

(5)

The Study: The Measurement and Motivation of Atypical Opinion in a Certain Group. Floyd H. Allport and D. A. Hartman.

See the American Political Science Review, Vol. 19, No. 4 for November 1925.

Range: College level.

Purpose: To measure atypical opinion in a certain group. Allport and Harman state that there is considerable agreement as to what is meant by a radical viewpoint but they ask the question: "Is there such a thing as a radical type of personality?" Therefore if there is, a method for the measurement and identification of such individuals is necessary. Hence the purpose of the test and the study.

Nature of the Study: The technique selected by Allport and Hartman consisted in getting a wide variety of opinions on some issue, and then scaling these opinions from one extreme position to the other. This graduated scale of opinions may then be read over by any one whose attitude is being measured, and he may indicate which statement best expresses his own opinion. The sample of the scale chosen then becomes a measure of attitude.

Attitudes of conservatism, liberalism, radicalism, and reactionism were estimated toward seven issues: the League of Nations, qualifications of President Coolidge, distribution of wealth, the legislative control of the Supreme Court, prohibition, Ku Klux Klan, and graft in politics. Statements about the seven issues were selected from the written descriptions of opinion of 60 students. Each statement was then ranked by six judges according to the degree of attitude expressed in it, and from these results seven tests were constructed. The opinion scales employed in this study are reproduced below:

I. The League of Nations Questions.

Directions: Place a cross (x) on the dotted line before the one item which most nearly expresses your own opinion. Mark only one item.

_____ We should uphold the Monroe Doctrine and our traditional policy of isolation from all foreign entanglements. We should stay out of the League of Nations.

_____ We should join the League with full responsibility to prevent aggression; but should first obtain sanction for this step by a popular referendum vote.

_____ We should, not not only join the League, but also we should work toward the ideal of doing away with the sovereignty of separate nations, and of establishing a super-government, or world state.

II. The Question of the Qualifications of President Coolidge.

Directions: same as I.

_____ Coolidge is perfectly fitted for the office of the President of the United States.

_____ Coolidge is a little too conservative.

_____ A man such as Coolidge is bound to bring with him a corrupt government

III. The Question of the Distribution of Wealth.

Directions: same as I and II.

_____ The wealth of this country is at present distributed fairly and wisely. Wage earners get a perfectly fair deal. The poor are necessarily poor because of low mentality and lack of ambition and thrift. Intelligence and ability to make money should be rewarded. There should be no government control of ownership of public utilities. Attempts at legislative control of wealth distribution will result in chaos.

_____ Concentrated wealth gives great power which should belong to the goernment alone. The amassing of fortunes beyond a certain limit should be prohibited by law, and the money returned to the people. There should be a very heavy income and inheritance taxes, rapidly approaching 100 per cent for the greater fortunes. The government should own and operate all public utilities and natural sources. The poor should be almost entirely relieved of taxation. Wealth should be equally distributed.

IV. The Question of Legislative Control over the Supreme Court.

Directions: same as I.

_____ It is proposed that Congress be given the power to set aside decisions of the Supreme Court as to the constitutionality of laws passed by Congress.

_____ This proposal is a menace to the very foundations of our government.

_____ Affairs will remain the same whether or not such a plan is put into effect.

_____ Congress should be able to over-rule any decision of the Supreme Court.

V. The Prohibition Question.

Directions: Same as I.

_____ The present constitutional amendment prohibiting alcoholic liquors and the law interpreting this amendment are both satisfactory, enforcement should be made more severe.

_____ Itshould be left to the states to decide whether they wish to permit the open saloon.

_____ The open saloon system should be universally permitted.

VI. The Ku Klux Klan Question.

Directions: Same as I.

_____ The Klan is wrong in principles and methods and should be denounced by political parties; steps to suppress it should be taken by the government.

_____ The Klan is right in its principles, but in general its methods in the past have been unwise.

_____ The Klan is absolutely correct in principles and methods.

VII. The Question of Graft in Politics.

Directions: same as I.

_____ The recent exposures in the "Oil Scandal" and similar cases show that the moral fiber of our government is rotten to the core. It is due also to the ignorance and low moral condition of the people. Practically all officials are corrupt. Those put out of power were only those who were caught.

_____ The whole affair was of trivial consequence. It was greatly exaggerated by newspaper publicity and by being made capital for political campaign speeches. It should be speedily forgotten.

The following scale of certainty and intensity of connection was given accompanying each opinion scale.

A.

Place a check above the item which applies to your answer:

Extremely uncertain; little more than guess	Rather uncertain	Moderately certain	Fairly firm belief	Extremely certain conviction

B.

Place a check above the item which applies to your answer:

I have practically no personal interest or feeling on this issue: my opinion is given indifferently.	My opinion is given with only moderate personal interest in this issue.	I feel very strongly upon this subject. I am intensely interested in seeing the policy I have marked be put into effect.

For scoring purposes, each statement was assigned a number in order, and an individual score was the number of the statement checked. The possible range of scores was from 1 to 5 and the units of vertical distance expressed the position of the average point of certainty upon the scale.

Ample directions were given with the test in order that the person who took the test knew what he was about. Twenty-five to thirty-five minutes was the required time to take the test.

The two underlying factors in atypical opinion are strength of conviction and sex differences.[1] Allport and Hartman found evidence of the relationship between atypical opinion and strength of conviction. Reactionary and radical types are alike in the fact that they are more certain in their opinions than those who lie at a mid-region of the scale. A man feels strongly because he knows he is right.

The ratings given for intensity of feeling upon the various questions were found to correlate so closely with the ratings for certainty (coefficient above 0.90) that there was little to be gained by plotting separate distributions. Intensity of feeling is thus shown to be correlated with increasing extremeness of view, at both ends of the scale.

After certainty of conviction perhaps the most interesting condition of atypicality disclosed by Allport and Hartman[1] is that of sex. It may be said that women of the group avoided the extreme positions on the scale, and formed a higher distribution than the men at the mode or modes of the curve. The men predominated, in porportion to their total number, at both extremes. The only exception to this rule occurred in the prohibition question, where a distinctly greater percentage of women than men chose the end positions in defense of prohibition. The conservative tendency of women was shown most strongly in the questions of legislative control of the Supreme Court and attitude on the Ku Klux Klan.

The scores made upon the study of attitudes show that the reactionary group tend to be scientifically minded, snobbish, and somewhat cynical. The radical group, on the other hand, are idealists rather than mechanists. They are inclined to be religious. They stand low in the score on scientific attitudes and high in moralistic, meliorative, and optimistic outlook on life. The femine qualities, conspicuous in sex differences, probably contribute to this characterization.

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1 Hartman and Allport, p.743.
"The Measurement and Motivation of Atypical Opinion in a Certain Group".

Results of the Study:

The following conclusions are set forth by Allport and Hartman:

> "The kindred nature of the reactionary and radical elements of our opinion curves is evidenced by the following facts. They lie upon the same side, rather than a straddle of the conservative group in self rating on emotionality, rapidity, and self reliance, in over-estimation of mental ability, possibly over-estimation of capacity for making love, failure to react when asked whether they approved of, or were averse to sexual relation, lack of agreement with the conventional moral code, tendency to deviate from the views of their parents and certainty and intensity of conviction upon a political issue".1

Additional agreement was found in the attitude study, not reported here in detail, in which radicals checked a number of reactionary items, and reactionaries checked a portion of the radical statements. The profiles show that they share one another's attitudes on diverse questions more fully than the conservative shares the attitudes of either. The atypical individual, in other words, may be reactionary or ultra-conservative in some things and radical in others. Allport and Hartman state that in the interviews studied, certain recognized motivations of personality were seen to lead in some cases to the reactionary point of view, and in some to the radical, according to chance influences and the conditioning of these tendencies in the social environment.

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1 p. 749. Hartmann and Allport, "The Measurement and Motivation of Atypical Opinion in a Certain Group".

Evaluation:

Allport and Hartman in this investigation attempted to study atypical individuals of the radical reactionary type by means of an attitude scale. They wanted to discover the psychological characteristics of individuals who had adopted extreme social and political views. The results of their study revealed that they accomplished their purpose. The detailed results of the study were presented in the last item discussed.

At the beginning of the study the question is asked: "Is there such a thing as a radical personality?" This is an important question and it is vital to our educational progress. This question is vital because at the present time psychologists are becoming increasingly suspicious of type classifications. This study aims at a method of measurement and identification of such individuals. Thus this study is of importance and also in harmony with educational advances.

It was discovered that the reactionary believers of the group were mainly "tought minded" and mechanistic. They exceeded the radicals in ratings of self reliance and self-sufficiency, in certainty and in lack of insight into their abilities and traits. Their opinions seemed to be more decided and their attitudes more pronounced.

The radicals seemed more retiring in nature. They were "tender-minded", religious, more aware of their inner motives and conflicts, less self assertive, more "touchy" in personal matters, and more sensitive to opinions of others.

Now the important thing is this. These differences remind us of the human contrast set forth by the psychopathologists. Psychanalysts divide their patients into extroverts and introverts. Thus certain elements and traits of the reactionary group are found in the extrovert, and other elements and traits of the radical group are found in the introvert. Allport and Hartman now raise the question: "If extroversion and introversion are simply different ways in which people resolve their mental conflicts, does it follow that the common basis we have found for the reactionary and radical is really the existence of conflicts underlying the thinking of each?"[1] Allport and Hartman raise the question but do not answer it.

This study lead Rosander[2] to say that it is a very important contribution to the field of education and sociology, because Allport and Hartman demonstrated the great value of this study for social psychologists as an attitude indicator to study the phenomena of their field.

In this test subjects were asked, not only to indicate the one item which most nearly expressed their opinion, but also

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1 p. 750.
2 Rosander, A. D. Phi Delta Kappan, Vol. 13, p. 79

to indicate the certainty of their view and the intensity of their feeling. In this way it was possible to analyze the attitudes of the radical and reactionary for purposes of comparison, one with another, as well as with the conservative.

This measuring technique has an advantage over the plain "yes-no", or "agreement-disagreement" type, because, when the subject checks his opinions he checks his feeling of intensity at the same time. This technique then gives a better indicator of the subject's attitude and also as to where he starts in his intensity and certainty.

This test would have to be revised to be used at the present time because of the many items that were pertinent to political and social issues of 1924. The study does show the possibilities of great value for future studies in this same field.

This test measured the verbal responses or the opinions of the subjects in regard to a number of political and social issues. The results of the test indicated what extent opinions were measured.

(6)

The Study: Testing the Social Attitudes of Children in the Government Schools in Russia. Jerome Davis of Yale University.

See the American Journal of Sociology for the report of the study in Volumn 32, number 6, for May 1927, published by the University of Chicago Press, Chicago.

Range: Children to Adult.

Purpose: The purpose of this study was to discover the occupational preferences of American children and Russian children in Russia.

Nature of the Study: The method used by Davis to study the occupational preferences of American children and Russian children in Russia was the rank-order procedure. He used a list of forty-five occupations and had every group rank these proceeding from those most favorable to those least favorable.

The list of occupations chosen and the instructions for grading them were as follows:

The Social Status of Occupations.

Which of the professions listed below are, in your opinion, the best and which are the worst? It often happens that we are proud of persons engaged in certain occupations, and ashamed of those engaged in others.

In the following list are forty-five occupations which you are to arrange in order of their social standing. After that occupation which is most "looked up to", place the number "1"; and after that which occupies second place in this respect, the number "2"; and so on, until finally you place the number "45" after that occupation which receives the lowest social rating. You will avoid mistakes if, on a separate sheet of paper, you first arrange the forty-five occupations into nine groups of five occupations each, putting the five highest in the first group, the next five in the second group, etc. Then you can put the five in each group in their proper order, and finally transfer your rankings to the column below:

OCCUPATION	RANK
1. Aviator	
2. Agent or salesman in distributing goods	
3. Artist	
4. Banker	
5. Bookkeeper	
6. Small storekeeper	
7. Manager of small factory (candy factory)	
8. Civil engineer (builds canals, bridges)	
9. Street cleaner	
10. Superintendent of a factory	
11. Doctor	
12. School Superintendent	
15. Commander in the Red Army	
18. Peasant	
19. Coachman	
25. Prosperous business man	
34. Professor in a university	
36. Priest or minister	
37. Village teacher	
40. Coal miner	
43. Chauffeur	
45. Electrician	

This test was given to four groups. The composition of the groups was as follows:

(A) Seventy-two Russian children of ages twelve to seventeen, with an average age of fifteen years.

(B) Twenty-one children of ages sixteen to nineteen with an average age of seventeen and nine-tenth years.

(C) Nineteen textile workers in Russia including ten girls and nine men with an average age of twenty and one-half years.

(D) Three hundred and six high school seniors and sixty-two college freshmen in the United States.

The following chart lists the occupational preferences of these four groups described above. Column I indicates group "A", Column II indicates group "B"; Column III indicates group "C", and Column IV indicates group "D". (The upper and lower ten choices are given for each group.

	I	II	III	IV
	GROUP "A"	GROUP "B"	GROUP "C"	GROUP "D"
1.	peasant	Member of central Executive Com.	aviator	banker
2.	aviator	mechanic	mechanic	professor
3.	Member of central Exec. Com.	civil engineer	electrician	doctor
4.	doctor	party worker	civil engineer	minister
5.	party worker	peasant	locomotive eng.	lawyer
6.	civil engineer	village teacher	party worker	auto manufacturer
7.	professor	professor	Commissar	school supt.
8.	Commissar	high sch. teacher	chauffeur	civil engineer
9.	mechanic	doctor	Comdr. Red Army	captain (army)
10.	coal miner	aviator	doctor; Ex. Com.	high sch. teacher
36.	house porter	store salesman	store owner	factory operator
37.	street cleaner	porter	banker	blacksmith
38.	store owner	store owner	street cleaner	coal miner
39.	waiter	waiter	coachman	porter
40.	coachman	barber	waiter	waiter
41.	small storekeeper	banker	porter	
42.	banker	small storekeeper	mgr. small factory	
43.	mgr. small factory	mgr. small factory	small storekeeper	hod carrier
44.	prosperous bus.man.	pros. bus. man	prosperous bus.man	street cleaner
45.	minister	minister	minister	ditch digger

Results of the Study:

In this test the results are easily noticed. The American children ranked banking highest, with college professor, doctor, clergyman, and auto manufacturer next. The lowest were coal miner, janitor, waiter, hod carrier, street cleaner, and the lowest of all ditch digger.

The Russian children showed striking differences. Children of Soviet Russia rank the peasant first, and give high places to members of Central Executive Committee of the party, mechanic, civil engineer, teacher, doctor, and aviator. The least desirable were salesman, house porter, owner of a store, waiter, banker, business man, and minister last.

It is noticed that in some cases the ranking of American and Russian children does not differ widely. A doctor and a civil engineer are ranked high by both groups; and a barber and a waiter are ranked relatively low.

Evaluation:

The author set out to discover the occupational preferences of American children and Russian children in Russia. From the results of the test the author discovered the preferences.

The test is important as an educational adventure because it demonstrates that there are varying social evaluations for different

professions and that such social judgments vary in different countries.

The method used was the rank-order procedure. It is obvious that there are a number of weaknesses in the method as used by Davis. It is too complicated for the average student. It is also probable that some students made their choices on the basis of their own preferences, rather than according to the actual standing of the professions in the community. Nevertheless, the method has possibilities. There is no reason why other tests may not be prepared which will show differences in thought-processes, customs, folkways, and mores. These should enable educators to secure scientific data about racial groups irrespective of the bias of the investigator. When tests of this kind have been standardized and can be used in a great many countries at the same time, there shall be a much better idea of the actual differences in culture in varying nationalistic groups.

The author measures attitudes by the use of verbal responses or opinions. The students gave their preferences to certain occupations on account of the opinions they held concerning those particular occupations.

(7)

The Study: The Measurement of Fairmindedness.

This experimental study was published by the Bureau of Publications, Teachers College, Columbia University, New York City, 1925. Copies of the test can be obtained at the Bureau of Publications. No duplicate form available.

Purpose: The real purpose of this test is the measurement of common deviations from fair-mindedness by a standardized objectively scorable test. The types of prejudices which it records are in the field of religious and economic issues. It does not assume that the radical or the conservative or the middle ground position is necessarily correct. Any opinion can be held by the subject and it will not count as prejudice until opinion leads to some deviation from fairmindedness.

Nature of the Study: In the construction of these tests for the measure of fairmindedness two dangers were present. One was that the test should be a measure of agreement with the opinions of the persons who constructed the test. A second danger was that the test should prove to be merely a measure of convictions, a test of opinions reasonably arrived at and held with a fair degree of confidence.

To avoid these dangers, these tests were constructed to measure prejudice defined as: "Any tendencies, however produced:

(a) to cross out, as distasteful, terms which represent one side or another of religious or economic controversies.
(b) to call sincere and competent persons who hold different opinions on religious and economic issues incompetent or insincere.
(c) to draw from given evidence conclusions which support one's bias but which are not justified by that evidence.
(d) to condemn in a group which is disliked, activities which would be condoned or approved in some other group.
(e) to regard arguments, some of which are really strong and others of which are really weak, as all strong if they be in accord with the subject's bias, or all weak if they run counter to that bias.
(f) to attribute to all the people or objects in a group, characteristics which belong to only a portion of that group". 1

Most of the tests were so constructed that opinions could be expressed on either side of the issue without going to the extreme of registering one of the tendencies which have been defined as prejudices. All of the tests were so constructed that prejudice or lack of fairmindedness could be registered upon several aspects of each of the religious and economic issues considered. One might be prejudiced for example, in the direction of fundamentalism, or of modernism, or of radicalism upon religious questions.

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1 Watson, Goodwin B. Measurement of Fairmindedness.

The following excerpts from the tests indicate the types of questions asked in each form:

FORM A.
Word Cross Out Test.

Directions: Read through the words listed below. Consider each one quickly. If it suggests more that is disagreeable than is agreeable, cross it out. You may cross out many or few words Work as rapidly as you can, but be sure you cross out every word which is more annoying than pleasing, more antagonizing than appealing, more distasteful than attractive.

The following are typical of the fifty-one words included in this test:

Bolshevist	Dancing
Mystic	Holy Communion
Sunday Blue Laws	Unitarian
Prohibition	Birth Control

FORM B.
Degree of Truth Test.

Directions: No one knows just what the American people are thinking. There is need to find out just what convictions are most firmly held on some disputed issues. Indicate your opinion about each one of the statements, by drawing a circle around the one of the numbers in the margin which expresses your judgment. The meaning of each number is as follows:

(+2)	+1	0	-1	-2	If you feel the statement is utterly and unqualifiedly true, so that no one who had a fairly good understanding of the subject could sincerely and honestly believe it false.
+2	(+1)	0	-1	-2	If you feel that it is probably true or true in a large degree.
+2	+1	(0)	-1	-2	If you feel that it is quite undecided, an open question or one upon which you are not ready to express an opinion.

+2 +1 0 (-1) -2 If you feel that it is probably false or false in a large degree.

+2 +1 0 -1 (-2) If you feel that the statement is utterly and unqualifiedly false, so that no one who had a fairly good understanding of the subject could sincerely and honestly believe it true.

Work rapidly, but do not fail to circle one figure in each line.

1. +2 +1 0 -1 -2 The churches are more sympathetic with capital than with labor.

3. +2 +1 0 -1 -2 Jesus was more interested in individual salvation than in social reconstruction.

16. +2 +1 0 -1 -2 Our government is controlled by great financial interests.

29. +2 +1 0 -1 -2 Poor men cannot get justice in the courts today.

51. +2 +1 0 -1 -2 Prohibition, in the experience of the United States, has been a failure.

Form C.
The Inference Test

Directions: Mere facts may mean different things to different people. It is often important to know just what people think certain facts mean. In the following list you will find several statements of fact, and, after each, some conclusions which some people would draw from them.

Put a check (✓) in front of each conclusion that you believe is fairly based upon the fact as given here. Do not assume anything else than the evidence given in the statement here, with all its terms understood. You are not to consider whether the conclusions are right or true in themselves, but only whether they are rightly inferred from the facts given in the statement. You may check as many as you believe to be perfectly sure and certain. Do not check any merely probable inferences.

I. Statistics show that in the United States, of 100 men starting out at an age of 25, at the end of 40 years one will be wealthy and 54 will be dependent upon relatives or charity for support.

1. ( ) The present social order cheats the many for the benefit of the few.
2. ( ) The average young man, under present conditions, cannot count on being wealthy at the age of 65.
3. ( ) Most men are shiftless, lazy, or extravagant; otherwise they would not need to be dependent.
4. ( ) The one man is living upon luxuries ground out of the bones of the mass of common people.
5. ( ) Some day the workers will rise in revolt.
6. ( ) None of the conclusions can be fairly drawn.

V. A considerable majority of the public school teachers of one of the large cities of this country are Roman Catholics.

1. ( ) The Roman Catholic Church is one of the best educational agencies in the world.
2. ( ) The Roman Catholic Church is trying to get control of the government.
3. ( ) It is time Protestants woke up to the danger of such situations and did something about them.
4. ( ) The school board must be largely Catholic.
5. ( ) The Protestants among the teachers are quite outnumbered.
6. ( ) No conclusion here can fairly be drawn.

FORM D.
Moral Judgment Test

Directions: Most actual judgments of right and wrong have to be made in concrete instances. Mere general principles are not enough. In the following statements you will find several instances upon which the moral judgment of individuals would differ. Read each carefully. You may assume each fact as stated. Then look at the alternatives suggested below it. Place a check in front of the one with which you most fully agree. If you do not fully agree with any, check the one which comes nearest to expressing your opinion about the incident.

II. During the Irish rebellion of a few years ago, feeling in Scotland ran high and hot against the Irish. Some agitators were arrested and in the wave of feeling against them were deported to prison without fair trial. Recently a Glasgow court awarded damages to some of these men for the treatment the government had given them.

1. ( ) The action of the court was worthy of approval.
2. ( ) To do so was quite a matter of course - indifferent.
3. ( ) Such action must have been taken by unpatriotic judges or the court would not have awarded damages.
4. ( ) To award damages to agitators was foolish or wrong.

XIV. A church in a western city publishes a news-letter each week, proclaiming its message, and advertising its service. The letter is taken to the door of every home in the community by boys of the church.

1. ( ) The church has an excellent plan for advertising.
2. ( ) It makes no difference whether churches follow such policies or do not.
3. ( ) The church should not seek to get the attention of people and to influence them in such a manner.

FORM E.
Arguments Test

Directions: In deciding important questions it is necessary to distinguish between strong, important arguments and weak, unimportant ones. Read each argument, and then decide whether you would call it strong or weak. If you feel that it is a strong important argument, well worth considering, draw a line under the word "Strong". It makes no difference whether it is on the side of the question with which you agree or not. Wherever the argument is weak and unimportant, draw a line under the word "Weak".

V. Should young people today participate in social dancing?

1.	Strong	Weak	Many young people enjoy dancing.
2.	Strong	Weak	John Wesley and other great church leaders have opposed dancing.
3.	Strong	Weak	It often leads to undesirable excesses.
4.	Strong	Weak	Dancing is one of the commonest, best recognized forms of recreation, bringing young men and women together, so that one who does not dance is shut out from many fellowships.
5.	Strong	Weak	Dancing is a graceful form of self-expression in rhythm and to music.
6.	Strong	Weak	Dancing is likely to be accompanied by jazz instead of by more worthwhile forms of music.

FORM F.
Generalization Test

Directions: In a democracy it is always important to know what the people are thinking and how generally they believe certain statements to be true. Before each line there are five words, any of which might fit in the blank. Draw a circle around the one which best expresses your own conviction. Be sure you do not omit any statements.

1.	All	Most	Many	Few	No	- ministers of churches lead rather lazy lives.
2.	All	Most	Many	Few	No	- Communists are men of high ideals.
3.	All	Most	Many	Few	No	- Roman Catholics are superstitious.

FORM G.

This is a personal data sheet which the individual fills in. Questions such as - sex, age, occupation, wealth, education, etc., are asked.

Two methods[1] for scoring the tests have been developed. First the tests may be scored to find the general level of prejudice within the individual or group. In determining this "gross score" the examiner is not concerned with the direction which particular prejudices take, nor with the strength of economic as compared with religious prejudices.

The "Gross Score" may be objectively determined in accord with the specific directions given in the manual. The scoring method is:

Form A:	1 point for each word crossed out.
Form B:	3 points for each extreme statement
Form C:	4 points for each unjustified conclusion.
Form D:	3 points for being indifferent to an act in one case, while approving or disapproving the parallel act; 5 points for approving in one case and condemning in the other.
Form E:	4 points for any question upon which all the arguments on one side of the question have been rated either strong or weak, while all, or all but one, of the arguments on the opposite side have been given the reverse rating.
Form F:	3 points for making the "All" or "No" generalization about any case.

This yields a total of 489 possible points. The score should be expressed in per cent. Thus, a very fairminded person may score only 49 points all told, a gross score of ten per cent. A very prejudiced person may take 60 or 70 per cent of the chances to manifest a prejudice.

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1 Watson, Goodwin Measurement of Fairmindedness, pages 13-17.

The second method of scoring, while more expensive and complicated, is more rewarding. The "analytical score" thus obtained,indicates the extent to which the prejudices of the subject are in agreement with the special interests of capitalists or of economic liberals, or of economic radicals, or of fundamentalists, or of Roman Catholics, etc.

The "Analytical Score" will tell to what extent the prejudices manifested by the subject are in agreement with each of the following points of view:

1. Economic radicals
2. Economic liberals
3. Economic capitalists
4. Persons fighting for a "social gospel" rather than an individual interpretation.
5. Persons interested mainly in a "personal gospel", prayer, mysticism, communion, salvation, etc.
6. Fundamentalists, orthodox "Apostles' Creed" variety
7. Modernists, holding Christian views
8. Religious radicals, very broad, displeased with most existing Christian manifestations of religion
9. Protestants who are inclined not to like Catholics.
10. Catholics who are inclined not to like Protestants.
11. Persons with high, strict standards of sex-ethics, or amusement, or "bad habits" or similar moral matters.
12. Persons with broad loose standards of sex-ethics or amusement, or "bad habits" or similar moral matters.

The reliability of the general level of prejudice indicated by the gross score was computed by finding the score which would be obtained by half the test (items 1 - 3 - 5 - 7 etc.) and the

correlation of that score with the score obtained by using the other half of the tests (items 2 - 4 - 6 - 8 etc.). Thirty papers selected to give a normal distribution yielded a self correlation of .92 plus orminus .02. For sixty one papers, the self correlation was .89 plus or minus .015. For seventy additional papers the self correlation was .96 plus or minus .001. These correlations indicated the relationship to be expected between one half of the test and the other half of the test. Applying the Spearman-Brown Prophecy Formula, Watson discovered that it was to be expected that the correlation between one administration of the test and another administration under the same circumstances might reasonably be expected to be .96.

The reliability of the diagnostic score of the test was discovered in the same way. It was found that within the 72 lines of bias used for diagnosis there was a variation in the correlation between .68 to .88. Watson said that this result was not a very significant difference.

What do the tests really measure? Judging by their reliability they are a consistent measure of something. At least they are as consistent as is the ordinary group test. Watson says:

> "If we may judge by the nature of the tests themselves, they seem to measure fairmindedness, as contrasted with prejudice or bias. This seems to be true on every form of the test. The tests as a whole appear to measure something in which persons who have been selected as very prejudiced register a very high score of 50%, 60%, and 70%, while the average students register 30%, and the most fairminded individuals register 5%, 10%, or 15%."[1]

The tests reveal approximately the same prejudices which close acquaintances have discovered by long association. Most individuals, confronted with the results, believe them to be a fair measure of their own prejudices. The tests applied to groups show differences between those groups at the points at which competent judges would expect to find differences in prejudice. Perhaps, therefore, it may be concluded, that unless conflicting evidence should be obtained, these tests may be regarded as usable measures of prejudice as contrasted with fairmindedness, upon certain religious and economic issues.

Results of the Study:

The findings of Watson's test will be presented in Chapter IV of this thesis because the results discovered in individual and group profiles are good indicators of religious attitudes.

Evaluation:

Watson produced in this one test types of attitude measurement that can be used for years to come. He presented in one test

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1 p. 35. Watson, G. B. Measurement of Fairmindedness.

more methods for attitude measurement than any other test set up. The tests that he used must be analyzed with great care.

As a total test the Watson survey may be used to determine the degree to which an individual tends to lean toward extreme opinions in either the radical or conservative direction.

The results that Watson obtained demonstrates that the test measures what it purports to measure, namely, the deviations from fairmindedness.

This test is pertinent to educational uses and is in harmony with educational procedures. For example, Watson, in investigating the need for tests of fairmindedness found that the creation of accurate tests was a desirable prerequisite to the study of the effectiveness of various teaching methods. Watson says: "Once such a test has been prepared, it is possible to test, in equated groups, the effectiveness of lectures, sermons, prayer-meetings, movies, pageants, group discussions, posters, reading assignments, advertisements, and other supposed techniques for influencing public opinion".[1]

In Form A, the "Cross-Out Test" is similar to the Pressy "Cross-Out Tests". The words given represent some of the most irritating elements in economic life. It is assumed that if a person crosses out any of these items he tends to oppose the established economic order.

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1 Watson's Study pp. 36-37.

In Form B, the "Degree of Truth Test", and in Form F the "Generalizations Test" statements are given which the subject is to approve or disapprove. In Form B the directions state that he is to indicate the "degree of truth" of the statement. If the response were merely made to indicate whether the statement is true or false, this would become a true-false test. In this instance, Watson wishes his subjects to estimate degrees of truth or falsity.

In Form F, "Generalization Test" similar statements are given, but whereas the former asks for the degree of conviction for or against the statement, this test asks for an estimate of the degree to which the statement can be said to be true. P. M. Symonds, in evaluating this test, adds an important point. He says "Those who think statistically will see that a man's belief of the degree of truth of a statement, if based on reasoning, would depend upon his estimate of the probabilities in the situation, and this leads back to the generalization test."[1] However, opinions are determined by so many other factors than reasoning that the relationship between the two tests cannot be pushed too far.

Symonds says[2] that the other three tests, instead of getting at opinion directly, do so indirectly by testing the reasoning that one does in connection with the issue. Two of these tests,

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1 Symonds, P. M. Diagnosing Personality and Conduct, p. 218.
2 Symonds, in his new book, presents an excellent review and summarization of Watson's study

Form C and Form E, are based on the assumption that extreme prejudiced attitudes in either direction are either based on, or lead to rationalizations. Form E is based on the supposition that persons who hold extreme opinions tend to belittle the arguments and evidence in favor of the opposite point of view, and try to stress or emphasize the arguments and evidence in favor of their own stand. In Form C since most of the situations are described very briefly, no very important or extreme conclusions can logically be drawn. Accordingly, any one who marks a conclusion extreme in either direction may be said to be biased or prejudiced.

Form D, "Moral Judgment Test" is a test based on the supposition that persons tend to be more biased about contemporary, immediate, personal affairs, than about historical, distant, and impersonal affairs. The tests consist of parts of described situations, one about a historical or distant event and another about a contemporary or immediate event. Statements are then given which approve or disapprove, or in some way pass judgment on the story, one of which is to be marked if agreed with.

These tests were constructed on the hypothesis that one's expressed attitude is based on or leads to rationalization. For example, Symonds[1] says that in the Argument Test this was supposed to be shown by the tendency to overlook the logic in an argument; in the Inference Test, by the tendency to imagine things in a meagerly

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1 Symonds, Diagnosing Personality and Conduct, p. 221, 222.

described situation that do not necessarily exist in the situation, and in the Moral Judgment Test, by the lack of consistency when the situation is impersonal and when it grows warm to the person's prejudice.

Symonds offers a good summary concerning these tests. He seems to have hit the key-note when he says "These tests are good tests of attitudes because in them a person shows the side on which he stands regardless of what his reasoning processes may be. If it is true that conduct is best measured by tests with a purpose so disguised that the person shows unconsciously his hand while he thinks he is doing something else, then these can be said to be good attitude tests."[1]

Watson subscribes to the use of opinions and verbal responses as a means of indicating a person's attitude towards a given object or situation.

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1 Symonds, P. M. Diagnosing Personality and Conduct, p.222.

(8)

The Study: A Social Attitudes Questionaire.
Percival M. Symonds.

A report of this study can be found in the Journal of Education, Volume 16, 1925, p. 316.

Range: Eighth grade to college seniors.

Purpose: The purpose of this questionaire was to test the following objective of education: "Education for the future is education in openmindedness".

Nature of the Study: In order to test this objective of education, a questionaire was prepared which was really nothing more than a large ballot. Over 100 questions concerning present day living were assembled. The following example presents the type of questions in the questionaire:

1. Is it desirable that schools be permitted which are conducted in foreign language?	Yes	No
9. Should automobile drivers be given licenses without examination?	Yes	No
34. Should society deny any man the right to work?	Yes	No
59. Should the feeble-minded be educated?	Yes	No
85. Should the city maintain play grounds?	Yes	No
109. Should an accurate record of births, marriages and deaths be kept by a public agency?	Yes	No

In order to obtain a key, each question was answered by five persons: a sociologist, an English professor, two psychologists, and the writer,

with what each considered the liberal, progressive, or radical position. It is not thought that these three terms were synonymous, but that they contained in common a point of view which would set a definite answer to each question.

Questions which were answered with three "yes's" and two "no's" or two "yes's" and three "no's" were thrown out, leaving 115 for which the issue was considered definite. These were worded so that there was an equal number of yes and no liberal answers and were then placed in random order. It was not contended that there was a right or wrong answer to these questions, but for a key, the answers which were given as liberal, radical, or progressive were used.

The major desire of this test was to obtain an "impressionistic" answer, rather than any reasoned out answer. In the trial of this questionaire it was found that a class could run through all 115 questions in a half hour, a speed of work which precludes any very lengthy analytical thinking.

While Symonds maintains that liberalism should be the objective and product of education, he does not hold the validity of the liberal side of many questions as practicable at the same time. They are included in the questionaire simply as a means of sifting.

The tests were given from Grade VIII in Honolulu public schools through the University of Hawaii. In the directions permission was granted to any pupil to omit any question which contained technical terms with which he was not familiar, some items were not tried. This, however, did not run to more than two or three items a paper, as pupils seemed to have an opinion on almost every topic.

Because of these omitted items and because what was desired was the ratio of liberalness rather than an absolute score, the score was given in terms of per cent, that was, per cent of the questions which were answered on the liberal or progressive side.

The following table gives the means of the Social Attitudes Questionaire for Different Classes.

Groups	Number	Mean per cent
College seniors	8	80.3
juniors	25	81.5
sophomores	53	82.1
freshmen	95	79.3
High School seniors	58	80.5
juniors	57	77.6
sophomores	50	78.4
freshmen	48	77.9
Grade VIII	37	79.7

The surprising thing gathered from an inspection of the means is that there is practically no change in the means from the Grade VIII through the University. Symonds makes the following comment in regard to this evidence:

> "Hence it is surprising that strictly school education has been able to make no change in the above attitudes beyond Grade VIII. If there is anything that schooling should do, it should make children more liberal. Of all the objectives of education, training in broadmindedness would seem to be one easy of accomplishment."[1]

Children evidently came to school with attitudes formed on many social issues. They hear them discussed at home, in church, and in the newspapers. Possibly the teachers must become liberal before any change can take place.

To test the reliability of the questionaire a second form was prepared containing the same questions so expressed that the answer would be the opposite of the questions in the original questionaire. The correlation of the forms was -.67 for 102 cases.

The validity of the questionaire rested on the method by which the liberal side of the elements was selected. Since each question was scored according to its liberal interpretation as judged by five competent persons, the total score ought to represent a person's liberal attitude.

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1 Symonds, P. M. Journal of Educational Psychology, Vol.16, p. 319.

Results of the Study:

Symonds summarizes the result of his questionaire by an examination of the checked items. He says the items show several things:

"(1) Practices that are now in operation do not lead to questions which discriminate and the answers are usually favorable to practice.

"(2) Questions of government control and government benevolence are highly discriminative. Other topics which seem to discriminate are those having to do with religion, race, the treatment of criminals, taxation, international relationships and economic control by government.

"(3) Questions about which there is marked difference of opinion, but which at the same time do not discriminate between liberals and conservatives are those relating to private schools, marriage, the tariff, local control of schools, industrial [1] relations, immigration, alcohol, and censorship."

Evaluation:

Symonds set out to measure openmindedness as it existed in eighth grade through university classes. His test measured to a fair degree the purpose which he had in mind.

It can easily be said that this test was an important study because it tested one of the aims of education, namely, openmindedness. It was startling to see that practically no change was noticable in openmindedness from the eighth grade through the university classes. According to the results of

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1 Syminds, P. M. Journal of Ed. Psych., Vol. 16, p. 319.

this study education did not change the students' mind to a more liberal viewpoint.

The "yes-no" technique is used to mark the answers to the questions. It can be said that this type of questionaire is advantageous from the standpoint of the ease and positiveness with which the answers can be manipulated statistically and the comparatively brief task it usually imposes upon the informant. This type of test affords no middle ground position. It is impossible to state the degrees of intensity. Finer methods of construction are needed for predictability.

Symonds measured the student's attitudes by the use of verbal responses or opinions which the subjects held in regard to openmindedness.

(9)

The Study: A Scale for Measuring Attitude toward the Movies.
L. L. Thurstone.

This study was presented originally in the Journal of Educational Research, Vol. 22, 1930, pp. 89-94.

Range: Youth and Adults.

Purpose: The purpose of this test was to measure an individual attitude toward the movies. The purpose of the study was to present a scale for measuring attitudes, and to describe the method of construction.

The original collection of opinions about the movies consisted of 258 statements. They were obtained from literature on the subject, from conversation, and from direct questioning of subjects whose education and experience varied from that of seventh grade children to that of graduate students in the university. These opinions, each of which reflects an attitude toward the movies, vary from statements decidedly in favor of the movies through neutral statements to those very much opposed to the movies.

Each statement was written on a separate card. As a preliminary method of eliminating the most unsatisfactory and retaining the best statements, as well as to get an approximate idea of the scale values of the statements, the method of equal-

appearing intervals was used with a small group of sorters. Twenty-five people, who had some understanding of the method being used, and who were carefully chosen to make sure that the directions would be thoroughly understood and complied with sorted the cards into eleven piles according to the following instructions:

> "These cards contain statements about the value of the movies. Please arrange these cards in eleven piles so that those expressing attitudes most strongly in favor of the movies are in pile one, those which are neutral in pile six, and those which are most strongly against the movies are in the eleventh pile. The intermediate piles should represent equal steps in appreciation or depreciation of the movies.
> "Do not try to get the same number of cards in each pile. They are not evenly distributed.
> "The numbers on the cards are code numbers and have nothing to do with the arrangement in piles.
> "You will find it easier to sort them if you look over a number of slips, chosen at random before you begin to sort."[1]

The results of thses twenty-five sortings were tabulated to show in which piles each statement was placed by the group of sorters. The scale values were then determined graphically.[2] As an example of the method used, one of the graphs is reproduced on the next page:

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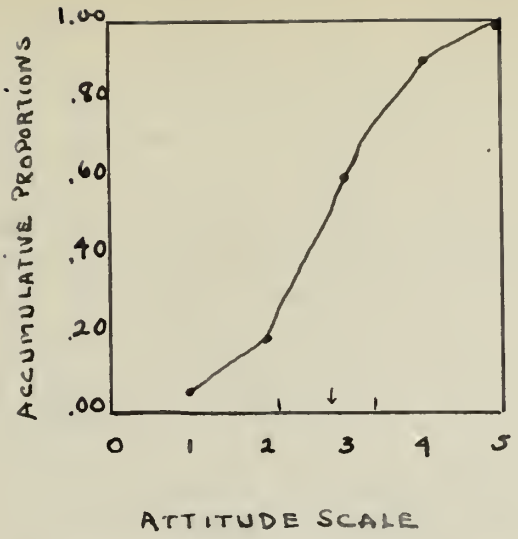
1 Thurstone, L. L. Journal of Ed. Research, Vol. 22, pp. 89-91.
2 Thurstone, Ibid, p. 90.



Statement Number 101, "Movies increase one's appreciation of beauty".

Q1	= 2.25	
M	= 2.90	Q = 1.20
Q3	= 3.45	

The figure represents statement #101 of the original group which was retained in the final scale as #12. The graph shows that all the sorters classified the statements as favorable to the movies. The curve crosses the 50 per cent level at the value of 2.9. This scale value is such that half the readers classified it as favorable to movies, and half of them less favorable. The scale value is indicated by the arrow head in the base line. The lines on either side of the arrow head indicate the quartile range of values assigned to the statement. The Q-value in this case is 1.20. This is a measure of the ambiguity of the statement.

For the application of a more exact scaling technique one hundred statements were chosen from the two hundred and fifty-eight.

The choice was based on the following criteria.

> "(1) A continuity of scale values - i.e. a selection of approximately the same number from each region of the scale.
> (2) Selection of statements with small Q-value. [1]
> (3) Diction and clearness of the statement itself."

The average Q-value of the statements retained was 1.18 with a range of .40 to 1.90.

Two hundred sets of these one hundred statements were then printed on three by five inch cards. The one hundred statements were then arranged in ten envelopes for rank order sortings. The first envelope contained the fifteen statements most strongly in favor of the movies as determined by the preliminary scaling method. The second envelope contained statements 8 to 22, the third enveloped 18 to 32, and so on, until the tenth envelope. Thus, it is seen that fifty of the one hundred statements were repeated in two envelopes.

The statements in each envelope were in random order and the envelopes were also put in random order. The ten envelopes of statements were presented to the people who were to sort them with the following directions:

> "Each envelope in this series contains fifteen cards. On each card is a statement about the movies. Some of these statements are in favor of the movies, and some of them are against the movies. Will you arrange the fifteen statements in each envelope

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1 Thurstone, L. L. Journal of Ed. Research, Vol. 22, pp. 91-92.

"so that the statement which is most in favor of the movies is on top, face up, and the statement which is least in favor of the movies, or most strongly against the movies is on the bottom. The cards should all be arranged so that each card is more in favor of the movies than the card under it and less in favor of the movies than the card above.

"In considering each statement ask yourself this question:

"How strongly in favor of the movies is the person who endorses or agrees with this statement?'"

Try to disregard your own attitude toward the statements.

"The identification numbers on the cards have no significance."[1]

Two hundred people sorted the statements by the above directions, putting the fifteen statements in each envelop in rank order. The results of these sortings were tabulated and from the tabulations Thurstone determined the proportion of times each statement was rated as more strongly in favor of the movies than every other statement. From these proportions the scale separations of the statements in each envelope were determined from the formula:[2]

$$b - a = \frac{\sum X_{ka} - \sum X_{kb}}{n}$$

in which (b - a) is the scale separation between a and b. Xka is the deviation (k - a) in terms of the standard deviation. It is ascertained from the probability tables by means of the

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1 Thurstone, Journal of Ed. Research, Vol. 22, pp. 91-92.
2 Ibid, p. 92.

observed proportions k > a. Xkb is the deviation (k - b) in terms of the standard deviation. N is the number of statements minus one.

Since there were overlapping statements in each adjacent pair of envelopes, the scale separations for the whole set of one hundred statements ranged from 4 to 74, the most strongly in favor of the movies to 0.00, the most strongly against the movies.

The one hundred statements were then divided into ten groups, with a range of .5 scale step in each group. Subsequently four statements were selected from each group, arriving at a final attitude scale. An example of the scale is given below, and the scale value of each statement is shown in parentheses following its serial number. The statements have been arranged in random order.

A Scale of Attitudes Toward the Movies.

Directions: This is a study of attitudes toward the movies. On the following pages you will find a number of statements expressing different attitudes toward the movies.

✓ Put a checkmark if you agree with the statement.

X Put a cross if you disagree with the statement.

? If you simply cannot decide about a statement you may mark it with a question mark.

This is not an examination. There are no right or wrong answers to these statements. This is simply a study of people's attitudes toward the movies. Please indicate your own attitude by a check mark when you agree, and by a cross when you disagree.

2. (1.3)[1] I am tired of the movies; I have seen too many poor ones.
9. (2.9) I think movies are fairly interesting.
12. (3.9) Movies increase one's appreciation for beauty.
15. (0.0) It is a sin to go to the movies.
27. (4.7) The movies are the most powerful influence for good in American life.
31. (2.0) I don't find much that is educational in current films.
35. (3.1) On the whole the movies are pretty decent.
40. (0.8) Young people are learning to smoke, drink, and pet from the movies.

In scoring the attitude scale it is impossible to say that one score is better or worse than another; it can be said that one person's attitude toward the movies is more or less favorable than another person's. It is purely arbitrary that attitudes unfavorable to the movies have lower scale values than favorable attitudes.

An individual's attitude is measured by the average or mean scale value of all the statements he checks. The person who has the larger score is more favorably inclined toward the movies than the person with a lower score.

The score is obtained by adding the scale values of the statements checked, and dividing that total by the number of statements checked.

Evaluation: The important item about this test is the detailed method of construction. Perhaps the most refined and objective method yet devised for measuring attitudes is Thurstone's Attitude

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1 These scale values do not appear on Attitude Scale.

Scale. The care with which this scale is constructed needs to be commended.

In selecting the statements for inclusion in the scale, Thurstone recognizes the following criteria:

(a) The statements should be brief as possible, so so as not to fatigue the reader who is asked to read the entire list.
(b) The statements should be such that they can be endorsed or rejected in accordance with their agreement or disagreement with the attitude of the reader.
(c) Every statement should be such that acceptance or rejection of the statement does indicate something regarding the reader's attitude about the issue in question.
(d) Double-barreled statements should be omitted.
(e) Irrelevant statements should be avoided.

Thurstone gives three criteria by which items of the scale may be judged for validity:

(a) The scale must transcend the group measured.

(b) The items must not be ambiguous.

(c) The items must be relevant, that is to see the extent to which those in a group who endorse the item tend to endorse items higher up the scale and fail to endorse items lower down the scale.

Thurstone has performed some valuable analytical work in the method of the scale construction from judgments preparatory

to the actual work of making a set of attitude scales.

Thurstone measures the attitudes of an individual or a group by their verbal responses to certain stimuli. This test presents a statement, favorable, neutral, or unfavorable toward the movies. The subject checks the statement which agrees with his opinion.

The Study: Religious Attitudes of College Students.
Read Bain.

This experimental study was published in the American Journal of Sociology, Vol. 32, No. 5, March 1927.

Purpose: The purpose of this study was to discover the existing religious attitudes of college students.

Nature of the Study: In the fall of 1924 the department of sociology at the University of Washington conducted an investigation on the attitudes of students in elementary sociology. The study included religious, domestic, educational, political, and economic questions.

In order to depersonalize the study, each student was given a number which he placed on each schedule. To get personal data in an impersonal manner, each student was asked to fill out a blank giving his age, sex, college rank, and his educational, political, religious, economic, familial, and residential backgrounds. This sheet was numbered to correspond to his questionnaire number. Thus the whole study was kept anonymous and at the same time made possible the analysis of the revealed attitudes in the light of the personal and social history of the subjects.

The instructors read the questions without comment, and the students recorded their reactions by the words "yes" or "no" in the corresponding spaces on their schedules. When alternatives were offered, they were written on the board. The students selected the word that best expressed their attitudes and wrote it in the space provided on the schedule.

The following example gives an idea what the test was like:

1. Is God a Person?	Yes	No
2. Is God an Impersonal Force	Yes	No
7. Was Jesus born of a Virgin	Yes	No
13. Do you believe in the eternal life of the Spirit	Yes	No

After the questions were all answered, the students were asked whether the anonymity of the method had influenced the frankness and honesty of their replies. About 43 per cent said they would not have answered as they did if they had been required to sign their names. Since the "taboo questions" differ somewhat for different persons, the anonymous method, according to Bain, is necessary in this type of an investigation.

It was discovered that 80 per cent of the students were familiar with at least 95 per cent of the questions, and that 90 per cent were familiar with more than 90 per cent of the questions.

To test the reliability of the answers, the students were asked whether they would have answered the questions substantially the same one week later. Ninety-four per cent said they would have done so. This is not conclusive evidence, and an experiment should have been tried. Bain, of course, admits that to establish a reliability he needed better evidence, experimentally obtained.

A further study of the results and significant findings of this test will be discussed in the fourth chapter of this thesis.

Evaluation: This test attempted to measure religious attitudes of college students. From the results obtained, which will be discussed later, there was evidence of the test obtaining certain religious attitudes of the students.

Religious attitude tests are important in our program of education in order to obtain a knowledge of how students feel and think about certain religious ideas. They can be used for diagnostic purposes by skillful teachers. This test of Bain's gives evidence of the importance of testing the attitudes of students on religious questions.

Bain's method of obtaining attitudes is possibly not as good as it could be although he did receive some interesting information. The students answered the questions "Yes" or "No", and of course in this type of response, we are not able to obtain the degree of intensity which the student answers the question with. It is a quick and easy method of obtaining attitudes; although it is not always valid.

Bain makes no attempt scientifically to obtain the validity of his results. The students did not have a formal set-up of the test schedule. Instructors read the test questions and the students answered "Yes" or "No" in the proper space in the sheet of paper which they were given.

Bain, although opposed to the use of opinion as synonymous with attitudes, uses in this test, verbal responses and opinions as indicators of attitudes.

(11)

The Study: Social Distance Test, by E. S. Bogardus.

This study was reported in the Journal of Applied Sociology, Volume VIII, 1924, page 339, and in Chapter X of Bogardus' book on Immigration and Race Attitudes, published by D. C. Heath and Co., Boston, 1928.

Range: Youth and Adult.

Purpose: The purpose of this test was to measure the social distance between different nationalities.

Nature of the Study: Bogardus measured social distance or "degrees and grades of understanding and feeling that persons experience regarding each other" by the method of rating by others. Seven steps were designated on the scale by the following phrases: to close kinship by marriage, to my club as personal chums, to my street as neighbors, to employment in my occupation in my country as visitors only to my country, would exclude from my country. The objects of attitude or opinion or social distance were races or nationalities. The following excerpt is an example of the test:

Social Distance Test.

Directions: According to my first feeling reactions I would willingly admit members of each racial group (as a class and not the best I have known or the worst members) to one or more of the groups under which I have placed a cross (x) (If you are wholly unfamiliar with any one of the racial groups, then no marks need be made. Note that crosses may be put in any number of the first five columns for each racial group. Note that a cross put in either column 6 or 7 for a given racial group means that no other crosses should be given that group.)

	Armenians	Bulgarians	Canadians	Chinese, etc.	
1. To close kinship by marriage.					
2. To my club as personal chums.					
3. To my street as neighbors.					
4. To employment in my occupation.					
5. To citizenship in my country.					
6. As visitors only to my country.					
7. Would exclude from my country.					

By having a group of people mark these tests for each of the several nationality groups, a measure of the average social distance felt by the group toward each of the groups in question, is obtained.

Trying the test on 1725 native Americans, Bogardus found the following percentages of "yes" answers to "close kinship by marriage".

English	93.7
Native White American	90.1
Canadians	86.9
Scotch	78.1
Irish	70.
Germans	54.1
French Canadians	49.7
Swedes	45.3
Dutch	44.2
Danes	35.
Russians	15.8
Italians	15.4
Czechoslovaks	8.2
Greeks	5.9
Mexicans	2.8
Japanese	2.3
Negroes	1.4

Two hundred and two Negroes and mulattoes answered the test. Their greatest sympathies were with Negroes, mulattoes, French, Spaniards, their greatest antipathies toward Russian Jews, Greeks, Russians, Turks.

The study revealed that adults feel less friendly than do adolescents toward Jews, Japanese, and Negroes, while they feel more friendly toward Germans. Women have more antipathy than men toward Armenians and Russian Jews, but less toward Chinese.

Evaluation:

The test measures what it purports to measure, namely social distance between the subject and various nationalities or races.

The test is very important to studies connected with sociology, or with certain groups to find out their social distance toward certain items. It has been suggested that the test be used for classroom diagnosis in regards to social matters. While it is not an excellent test for diagnosis, valuable information can be obtained that would aid in a diagnosis.

The testing device used is merely a variation of the rating system. It is designed to measure the "social distance" between the subject and various nationalities or races. This same device can be used in relation to occupations, interests, and other social conditions. Its chief difficulty lies in the construction of the scale representing degrees of "distance" or other factors measured. As it is, it represents a valuable method of measuring relative attitudes.

This test demonstrates the measurement of attitudes by the uses of opinions and verbal responses. The subject is presented with a statement, a racial element, and the subject agrees or disagrees with it according to his opinion about the situation.

(12)

The Study: Social Distance Score Card, J. L. Hypes.

The report of this study was presented in Social Forces, Volume VII, 1928, page 234.

Range: Youth and Adult

Purpose: The purpose of this study was to measure the intensity of attitudes of students toward a number of social situations.

Nature of the Study: Hypes has constructed a score card of a self-rating type for indicating the intensity of student's attitudes toward several social situations. The person indicates the degree of feeling he thinks he shows toward such situations. Hypes then draws student profiles and interprets the separation between them as a direct measure of social distance. In this way he gets evidence of the possibilities of conflict and harmony among individuals. The social distance score card for the item entitled "black color of skin" contains the following statements of social relationships or situations:

1. To admit to close kinship by marriage.
2. To have as chums.
3. To accept as an official of one's church or club.
4. To admit as a member of one's church or club.
5. To have as a neighbor in same apartment house or in the same community.
6. To accept as an official in public office.
7. To admit to membership in one's occupation in one's country.

8. To admit as a citizen of one's country.
9. To admit to membership in one's political party.
10. To deal with in business transactions.
11. To admit as a visitor to one's country.
12. To recognize as a casual acquaintance.

Each subject is asked to indicate the intensity of his approval or disapproval of these situations by checking the the appropriate point on an assumed numerical scale consisting of ten points on each side of a neutral or indifference point. Checking a minus ten shows extreme disapproval, while checking a plus ten shows extreme approval.

Evaluation:

Hypes' test measured what it purported to measure, namely, intensity of student's attitudes.

The test is important and in harmony with educational progress for it presents certain social situations that require the person taking the test to indicate his approval or disapproval. The social situations are vital because they present real life situations.

The type of test is a score card of self-rating. The individual checks his degree of approval or disapproval to a number of statements about a certain problem. The test shows rather quickly just how the individual agrees or disagrees with the situation and with what intensity. A person may check the score card in a false way in order to please the examiner.

The test is not fool proof.

Hypes measures attitudes by opinions and verbal responses of individuals to certain stimuli.

(13)

The Study: A Scale for Measuring Attitudes, Hugh Hartshorne and Mark May.

This study was reported in the Journal of Educational Psychology, Volume 17 for March 1926.

Range: Ages 8 to 16.

Purpose: The purpose of the experiment was to construct a scale that would measure the tendencies to cheat, thereby reflecting the attitude of the individual.

Nature of the Study: Hartshorne and May set out to test the varying degrees of pro-attitude by the resistance overcome in order to cheat, and the degrees of anti-attitude by the strength of the motive it took to induce cheating. This situation was so arranged that it was perfectly clear to the child that nothing would be lost or or gained by cheating, that if he cheated no one would know about it but that if he was honest no one would know it. It was assumed that those who cheated under these conditions had a tendency toward it, and that

those who did not cheat had a tendency against it, or else were neutral. From this middle point the scale was constructed.

By keeping all aspects of this general situation constant except the first element, that of difficulty of cheating, the scale roughly measures pro-cheating attitude. By keeping the entire situation constant and by adding on a series of constant motives, the scale measures the anti-cheating attitude.

One of the scales which Hartshorne and May used, consisted of seven steps; five pro and two anti. At the extreme of the pro-attitude, the steps were defined by the behavior of the children on the following tests:

"1. An Information Test, consisting of 28 items steeply graded in difficulty. Instead of underlining the correct answer, the pupil is required to encircle it in ink. He is told to guess if he does not know. In fact, he is not allowed to hand in his paper until he has guessed at every answer. These papers are taken to the office where a duplicate of each is made. A day or so later the original papers are returned to the children with answer sheets and they are instructed to grade their own papers. Each child has previously been supplied with an ink eraser in connection with his school work. In order to cheat on this test it is necessary for the child to erase a circle drawn in ink and make another. This is rather difficult because it is not easy to make a clean job of it. By comparing the corrected paper with its duplicate in the office, it is possible to see how much cheating has gone on.

"2. An original Disarranged Sentence Test, requiring the use of a pencil. The test is to straighten out mixed words so they will make a sentence. In case the child finds one too difficult, and they are sharply scaled in difficulty, he is

required to draw a line through the blank space to indicate that he has definitely given it up and omitted it. Then the papers are redistributed with answer sheets, cheating is accomplished by erasing a whole sentence written in pencil. This is easier to do than to erase a circle made in ink. Consequently a greater percentage cheat on Test 2 than on Test 1.

"3. The Thorndike-Mc Call Reading Scale. The same procedure is used here as for Test 2. Cheating is done by changing one or two words - sometimes a whole phrase - and by adding answers. Pencils are used.

"4. A Sentence Completion Test. Cheating here consists in either adding on more words, that is, doing more items, or in changing the words previously written by erasing and rewriting.

"5. An Original Spelling Test. It is made up of 90 words.. This test represents the very easy level of cheating. All the child has to do is to add more check marks or erase those previously made. It is very easy to erase a check mark. This test is intended to strike in at about the neutral level outlined above. Cheating on it is easy and as far as we know no child has suspected that we keep check on the amount of cheating. It is not directly motivated although there is, of course, such habitual motivation as is involved in routine school work.

"6. A Word-Knowledge Test, given with slight motivation and therefore on the anti side of the neutral point. This is arranged as a multiple choice test. The response words to each stimulus word are numbered one to five. The task is to find the correct response word and write its number on the dotted line in the margin. This makes cheating easier than it would be if the response word were underlined. Motivation is provided by writing the norms for the grade concerned on the blackboard. This sets a goal for each child to work for.

"7. An Arithmetic Test, the answers being written at the right margin. The only essential difference between this test and Test 6 is that the children are told that this will count in their monthly standing."1

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1 Hartshorne, Hugh and May, Mark Journal of Educational Psychology, Vol. 17, pp. 149-150.

Hartshorne and May then set up a criteria[1] for evaluating the scale. These steps will be presented here, with the application of the criteria.

1. The scale should present a series of situations calling for behavior in which cheating is possible, and not likely to be discovered. This first criterion has been dealt with in describing the tests.

2. The motives for cheating which are introduced at the anti end of the scale, should be connected with tests all of which are neutral in difficulty.

It was discovered that the difficulty of the Arithmetic and Word Knowledge tests was not neutral, for the results showed that about the same percentage cheated on the Spelling test, which was not motivated as on the Arithmetic test, which was motivated. The fact that the Disarranged Sentence test was harder to cheat on than the Reading test was shown not only by the fact that more pupils cheated on the Reading test, than on the Disarranged test, but that those who cheated made, on an average of 1.86 changes as against an average of 3.4. changes on the other.

3. The third criterion demanded that the steps on the scale be equal and preferably in multiples of same unit of measurement.

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1 Hartshorne and May Journal of Educational Psychology, pp. 152 to 157.

Theoretically, Hartshorne and May attempted to measure attitudes toward cheating in terms of the amount of resistance overcome, but they had no units of resistance. The normal curve was used with the S D (standard deviation) as the unit.

The following table[1] presents the per cent of cheating that occurred in each test, the standard deviation of each test, and the scale value for each test.

TESTS	PER CENT CHEATING	S.D.	SCALE VALUE
Information	2	+ 2.06	51
Disarranged Sentences	17	+ .96	40
Reading	43	+ .08	31
Language Completion	51	- .28	27
Word Knowledge	59	- .64	24
Arithmetic-Spelling	80	- 1.00	20

From this table the following scale[1] was made.

S.D.	-3.0	-2.5	-2.0	-1.5	-1.0	-.5	0	+.5	+1.0	+1.5	+2.0	+2.5	+3.0
Scale Value	0	5	10	15	20	25	30	35	40	45	50	55	60

The fourth criterion required a zero point either arbitrary or absolute. The Spelling test came nearer the zero point than any other test. Thus the absolute zero or neutral portion could be placed between the spelling test and those who did not cheat at all. This mark then would be near -1.00 S.D., or what, on the above table is called 20.

1 Hartshorne and May Journal of Education Psychology, Vol. 17, p. 154.

The fifth criterion demanded that the limits of the scale should be on the pro end, a point of difficulty where no one would cheat, and at the anti end, a situation where all would cheat. Examining the table that was presented in explaining the third criterion, it demonstrates how well the fifth criterion was met. Two per cent of the students cheated on the Information test and eighty per cent cheated on the Arithmetic and Spelling tests.

The sixth criterion for the scale was that when a subject cheated on one level of difficulty, he should theoretically cheat on all easier levels. This fact was demonstrated for the six students that cheated on the Information test cheated on everything else. It should also be noted that apart from the Information test the percentage of cheating increased, as the cheating situations became easier.

The seventh criterion stated that all those who cheated at least once should cheat on the lowest level; and those who cheated twice on the two lowest, and so on. This seventh criterion was not so easily met. If it was a perfect scale, then all those who cheated at least once should have done it on the last step, and all those who cheated at least twice should have done it on the two easier steps, etc. The proportion who did this is shown in the following table:[1]

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1 Hartshorne and May Journal of Educational Psycholoy, Vol. 17, p.156

Percentage of those Cheating	
At least once who cheated on Step 1	96
At least twice who cheated on steps 1 and 2	81
At least three times who cheated on steps 1,2,3,	73
At least four times who cheated on steps 1,2,3,4	86
At least five times who cheated on steps 1,2,3,4,5	100
Six times who cheat (necessarily) on steps 1,2,3,4,5,6	100

The eighth criterion involved the psychological significance of the steps. It was discovered that the steps on the scale were not particularly influenced by the differences in intelligence.

Hartshorne and May state that these levels, instead of representing attitudes toward cheating, may represent degrees of recklessness or daringness on the part of the student. Thus the person who erases the ink may have the same attitude toward cheating as the one who only makes a few changes in the Spelling test, but is much more daring. Attitude is a part of this "daringness or recklessness" and cannot be separated. Thus the student's attitude is measured in these situations which call for a certain amount of resistance.

The tests were scored as follows:

Name of Test	Score
Arithmetic Spelling	1
Word Knowledge	1
Completion	1
Reading	1
Disarranged Sentence	3
Information	4
Highest possible score	11

Thus an individual's score is zero if he did not cheat at all; and if he did cheat, it is the sum of the score values of the tests on which he actually made changes.

Results of the Test:

In concluding Hartshorne and May say:

> "Strictly speaking, what we measure by our techniques is not conduct but tendency or attitude for we remove the external barriers which ordinarily prevent the full expression of the tendency and permit the individual to go as far as he wishes to in the direction of dishonest performance. Finally we came upon evidence for believing that the attitudes constituting the driving power of the act are as specialized as the act itself."[1]

Evaluation:

Hartshorne and May built up a series of tests to measure attitudes which were reflected in tendencies to cheat. The series of tests measured what the tests purported to measure.

Hartshorne and May speak of attitude as the equivalent of a behavior tendency. Their scale measures dishonesty, particularly with reference to cheating in school situations. They say "Assume that by the time a child reaches the fifth grade he has more or less permanent sets or attitudes toward cheating in school work. He may be set against it, or be in favor of it, or be neutral toward it."[2] According to their definition an

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1 Hartshorne and May Studies in Deceit, Book II, p. 387
2 Hartshorne and May

attitude is a permanent set, as opposed to desire, which is a temporary set; but both are based on behavior. Their distinction is admittedly verbal, since both attitude and desire are determined by the amount of cheating actually done. An important feature of their attitude scale is that it ranges from a set of conditions under which everyone would cheat, to one under which no one would cheat. Under conditions most favorable to cheating they found that 85 per cent actually did so.

The theoretical importance of their testing techniques is its indirection. The students never knew they were being tested for cheating. Thus, as Bain would say, the status-affecting behavior patterns under rigidly controlled conditions were determined without any attention being given to subjective factors as such.

Their analysis makes very clear the difficulty of ascertaining why a given group of students have certain measurable cheating attitudes under one set of conditions and different attitudes under other conditions.

This study gives us an excellent example of objective scientific quantitative study of attitudes.

3. The Description and Evaluation of the Techniques of Attitude Measurement.

An extended summarization and evaluation of the various techniques and methods of attitude measurement will be given at this point. An attempt will be made to correlate and integrate the various methods and techniques. No one category would be able to classify the techniques used on account of the various differences involved in similar techniques.

1. Life History Materials.

Life history materials are becoming more prominent every day in clincal research institutions. To say that these materials are the best evidences of attitudes is an exaggeration. Life history materials do offer evidences of attitude. Krueger claims that the life history material "is introspective and reflective, revealing the inner private life in terms of the fundamental motives or attitudes and the social situations which call these attitudes into existence."[1] It is also felt that such documents as diaries and letters are much less censored by the influences and pressure of conventional society.

The difference between securing an expression of attitude through a life history document, and through the formal opinion questionnaire is, of course, purely a difference in the type of stimuli situation through which we elect a verbal response.

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1 Krueger, E. T. "The Value of Life History Documents for Social Research", Journal of Applied Sociology, Vol. 9, 1925, p. 197.

In the case of the life history document it is assumed that these stimuli are more indirect, covert, and subtle, and thus more disposed to secure an unbiased self-revelation as compared with the more direct and pointed questionnaire. Lundberg challenges this contention. He says, first, "The questionnaire method of eliciting response is capable of the same subtleties, covertness, and indirection as are the stimuli which elicit a life history document; and second, that it is certainly fallacious to assume that even such documents as private letters and diaries are free from pretenses, fantasies, and rationalizations which undoubtedly invalidate to a greater or lesser degree the face value of answers to a questionnaire."[1]

Finally, life history materials, such as autobiographies case histories, letters, diaries, etc., must be regarded as the crudest form of scientific social data. They become useful for scientific purposes only to the extent that they become expressed in objective terminology and become subject to quantitative classification. The value of life history materials for scientific purposes will depend on the degree to which they can be reduced to objective categories subject to statistical treatment.

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2. The Oral Interview.

The oral interview as a means of determining attitudes depends upon the skill of the worker and also upon the structure of the schedule of questions that is used to record data. This schedule is sometimes referred to as a "social survey record". The factors in the structure and content of the interview are interstimulation and response. The fact is that there is very little scientific data available on the subject, although research in this field lies at the foundation of sociology. Like all other techniques, skilled interviewing and social work must wait upon the development of the basic sciences which underlie these techniques. Only from such foundations can a scientific technique be developed in the oral interview.

Thus, as we shall see, these two techniques are not the best obtainiable for reliable indicators of attitudes. Much of the work is subjective and lacks the objectivity which is required of a good attitude indicator.

3. Objective Attitude Test Techniques.

The following techniques and methods are illustrative of the existing objective ways in which attitudes can be measured.

1. The "Yes" or "No" Question.

This type of questionnaire is advantageous from the standpoint of the ease and positiveness with which the answers can be manipulated statistically and the comparatively brief task it usually imposes upon the investigator. For these reasons it has been widely used. Its chief disadvantage lies in the difficulty of formulating questions on which a true attitude can be expressed in an absolute unqualified affirmative or negative. Actual attitudes tend to differ by infinitely small shadings and gradations.

Lundberg presents two objections to "Yes"-"No" type of attitude questionnaire:

> "(1) If the questions are made so extreme and general that they can readily be answered by "Yes" or "No" their value as an indication of the attitudes in which we are really interested becomes negligible. That is, the measuring device becomes too crude to register the finer gradations.
> "(2) If it is attempted to get at the finer gradations in attitudes, it is very difficult to formulate in a single question an attitude which can be unconditionally accepted or rejected."[1]

This same objection stands good for the "Cross-Out" tests. When this device is used, therefore, the attempt should be made to take a middle-ground between the two dangers. In any case,

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1 Lundberg, G. Social Research, p. 212.

the crudeness of the device should be recognized in drawing conclusions from the results.

Tests that bear evidences of this type questionnaires are as follows:

1. R. Baines; Religious Attitudes of College Students.
2. P. M. Symonds; A Social Attitude Questionnaire.

2. The "Cross-Out" Test.

This type of test illustrates what is perhaps the simplest method of ascertaining attitudes. The method is based on the principle that a tendency to cross out an unusually large number of words as annoying or distasteful is an indication of a general emotional set, or at least indicates an attitude on the subjects of which the words are symbols.

Lundberg says; "to the extent that the simplicity of this test secures a spontaneous reaction and to the extent that the conditions under which it is given are such as to reduce to a minimum the tendency of the person tested to be influenced by considerations of what others will think if he responds entirely spontaneously, this method of discovering general attitudes undoubtedly has some degree of validity."[1]

Two considerations affecting the validity of results achieved by this type of test must be kept in mind. In the

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1 Lundberg, G. Social Research, p. 210.

first place, there is the problem of selecting a list of words which are sufficiently definitely suggestive of at least two specific attitudes. In the second place, this type of test for determining attitudes has serious limitations, in that many situations toward which we are interested in determining attitudes cannot be expressed in a single word or phrase.

Watson's "Cross-Out" test in The Measurement of Fairmindedness is an illustration of this point of view just discussed. Let us continue the examination of Watson's test and discuss his "Degree of Truth" test.

3. Degree of Trust Test.

This type of test aims to discover people's attitudes by their tendency to hold extreme or positive views on doubtful issues. Its value will depend largely on the care with which the statements are selected. Lundberg says that these statements should be decidedly doubtful, impossible to verify objectively, and on which reasonable people may disagree. If this is true of the questions used, then an extreme view in either direction may properly be regarded as indicative of definite attitude or bias.

This type of test has the advantage over the more arbitrary "True" or "False"; "Yes" or "No" type in that it allows

for a gradation of opinion or attitude. The results, therefore, permit a tabulation of the attitudes with respect to degree of positiveness as well as their negative or positive character relative to a situation.

Example: Watson's "Degree of Truth" Test.

4. Inference Test.

This type of questionnaire involves familiarity with the simpler rules of logic. This test was constructed on the hypothesis that one's expressed attitude is based on or leads to rationalization, by the tendency to imagine things in a meagerly described situation that do not necessarily exist in the situation.

Considerable care would have to be exercised in the conclusions from such tests as to their value as indices of attitudes.

Example: Watson's "Inference Test".

5. Moral Judgment Test.

In this test the subject is asked to indicate which of several stated ethical attitudes he takes toward a given question. This type of test can be made quite valuable as a test of prejudice or other attitude by making it sufficiently extensive to include several similar situations which differ only in detail.

Watson says "It matters not, for the purposes of the test, whether the subject shall approve, be indifferent to, or

disprove the action in any situation, if only he will be consistent in the parallel act under slightly different circumstances."[1]

This test is significant not only in indicating a particular attitude but also in measuring fairmindedness.

Example: Watson's "Moral Judgment Test".

6. The Arguments Test.

This test is based on the tendency of people to regard the arguments favoring their own attitudes as strong and the arguments of the opposite side as weak.

There is a margin of error in attempts to get attitudes by this type device. This fact must be kept in mind, both in devising the arguments and in the scoring of the results. In the Watson Test, attitudinal significance is not attached to the results unless "all of the arguments on one side are regarded as strong or as weak; and all the opposite side, or all but one of those on the opposite side, are given a contrasting rating."[2] Thus, by attaching significance only to a prounounced and consistent attitude the validity of the results secured is greater. Another difficulty in this test is the matter of securing agreement by even a comparatively small group as to the validity of the arguments to be used in the test. Finally, as in the case of several of the preceding

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1 Watson, G. B. Measurement of Fairmindedness, p. 10.
2 Watson, G. B. Measurement of Fairmindedness, p. 23.

tests, training in logic is a big factor which might vitiate to some extent the value of this type of test as an indicator of attitudes.

Example: Watson's "Argument Test".

7. The Generalization Test.

This type of test aims to determine favorable or unfavorable attitudes toward a given subject by testing the person's willingness to make extreme generalizations on the basis of limited data.

In this particular test of Watson's, the attitudinal significance is attached to replies only if the extremes all or no are marked. Lundberg says "While this reduces the value of the test in detecting the less emphatic attitudes, it correspondingly increases the validity of the conclusions drawn from the results".

Example: Watson's "Generalization Test".

8. Agreement-Disagreement Test.

The agreement-disagreement test is similar to the "Yes-No" type or "True-False" type. It is possible for this type, to test the individual on a wide range of reactions in a brief time. The test is also easy to score. The difficulty with the test is the fact that it does not measure gradations

of attitudes. The test offers no middle ground or neutral position so to speak.

Example: M. H. Harper, "Social Beliefs and Attitudes of American Educators".

Another series of tests similar to this group is found in Allport's study of "Political Attitudes. In his first test the subject has a choice of four answers to one problem and he is instructed to check the answer that he agrees with. The second part of the same test is a series of true-false statements to a particular situation. The last test which is of more importance than these is an agreement-disagreement situation where the subject can check almost a neutral position - which Allport calls "slight agreement".

Example: G. W. Allport, "The Composition of Political Attitudes".

9. Intensity of Agreement or Disagreement Tests.

This type of test measures more than just a "yes" or "no" response. The test measures the degree of intensity of the attitude held by an individual. This type of technique is important because it gives a more valid indicator as to the type of attitude and the degree of strength which the attitude displays within the individual. More care has to be observed in

the construction of a test like this because it is necessary to have an even balance on either side of the neutral point.

When tests of this type are used, they present a better index to an individual's attitude than do the tests that ask for a "yes" or "no" vote. Tests of this type are better for diagnostic purposes. The results of the test scores can be studied by a fair degree of certainty that the test has actually measured something.

Examples:

1. G. B. Neumann, "A Study of International Attitudes of High School Students".
2. F. H. Allport and D. A. Hartman "The Measurement of Motivation of Atypical Opinion in a Certain Group".
3. H. Hart, "A Test of Social Attitudes and Interests".
4. J. L. Hypes, "Social Distance Score Card".

10. Rank-Order Procedure Test.

This type of test presents a list of items which a subject is to rank according to his preference. His attitude toward the object in the test influences the ranking. Although Davis set up a fairly good test, it has a number of weaknesses. One of these weaknesses is that the test is too complicated for the average student. On the other hand, this method has possibilities. This test permits a comparative study of groups, regardless of the bias of the investigator.

Example: J. Davis, "Testing the Social Attitudes of Children in the Government Schools of Russia".

11. The Rating Method.

There are two types of rating methods. The first type of rating method is called the self-rating method in which the subject rates himself with reference to an attitude or opinion. Hypes constructed a score card for self-rating for indicating the intensity of attitudes toward a number of social situations. Hypes' score card is rather important for the individual not only checks his attitude but also the degree of intensity which he demonstrates toward the particular situation.

Example: J. Hypes, "Social Distance Score Card".

The second type of method is called the rating-by-others method in which the attitudes of persons are rated by their friends or acquaintances who have a definite knowledge of those attitudes. Bogardus measured social distance or "degrees and grades of understanding and feeling that persons experience regarding each other" by the method of rating by others.

Example: E. S. Bogardus, "Measuring Social Distances."

12. The Attitude Scale (Computed Scale Values)

Perhaps the most refined and objective method yet devised for measuring attitudes is this attitude scale worked out by L. L. Thurstone.

Thurstone has worked out an elaborate mathematical technique for the measurement of attitudes. He writes on separate cards a large number of statements, representing every possible shade of attitude or opinion on a given question. Then he asks a large number of judges to make various judgments about these statements. The final result is a scale of selected statements which according to the statistical results, are supposed to represent equal intervals of attitude difference from the one extreme to the other. By examining the statistical distribution of any given statement, he is able to give it its proper place on the scale, and to tell whether it is ambiguous or clear, relevant or irrelevant, to the main question. He also believes this method can be used as a substitute for the correlation method in solving many problems regarding the resemblances of two or more attitudes.

Thurstone constructs attitude scales by either of two psychological methods. In the method of equal appearing intervals, from fifty to a hundred judges sort into eleven piles about one hundred and fifty single statements representing varying degrees of approval or disapproval of the given issue, so that a noticeable difference in degree of affect is discernible as one goes from one pile to the next. After this is done the

frequency distribution of each statement over the piles in which it has been placed is determined and the fifty-percentile point, interpolated in terms of the interval, is taken as a scale value of the statement. After the scale value of each statement is computed an evenly graduated series can be selected, and two or more equivalent forms can be made if enough statements are available. Even with the many technical shortcomings of this method it places attitude measurement on a more scientific basis.

In the method of paired comparison each psychological object is compared with every other one, and the subject is asked to mark which of the two represents the greatest degree of affect. Then by an appropriate application of the law of comparative judgment scale values are computed for every word or statement. This method does not give the scale position of an individual, but only the distribution of the affect of the group as a whole toward the object presented. It is useful for making group comparisons, but not for obtaining individual scores. Another shortcoming of the comparison method is that even with as many as fifty objects the number of judgments becomes prohibitive for ordinary experimental purposes.

Examples:

1. L. L. Thurstone, "A Scale for Measuring Attitudes Toward the Movies".
2. L. L. Thurstone, E. J. Chave, "A Scale for Measuring Attitudes toward the Church".

13. The Duplicating Technique.

This technique which was used to measure deceptiveness also measured attitudes. This technique was set up by Hartshorne and May when they built their series of Deception tests.

The main feature of this technique was an attempt to locate the underlying mental sets or attitudes that a student would reveal in an experimental directed response to an experimental controlled situation. This duplicating technique was similar to the paraffin-paper technique set up by Voelker in his study The Function of Ideals and Attitudes in Social Education. The duplicating technique affords the same results as the paraffin test.

Since a thorough description of the administration of this technique was given in the interpretation of the study of Hartshorne and May, no more information will be needed to describe how the technique operated in the series of tests given to the students.

This is one of the finest techniques that attempts to measure the overt reaction of the subject. The advantage of this technique is the fact that it attempts to get the student to react to a real life situation of ordinary conduct. Since the student does not know what the purposes of the tests are,

the technique records the student's inner mental sets or attitudes by the resistance he displays to overcome cheating.

This measuring technique, although experimentally controlling all factors, gives the student an opportunity to show his actual overt behavior to a situation. This technique is mighty valuable because it measures the reaction "sets" of the individual to a given stimulus.

Bain says that this technique is one of the most contributive techniques to the measurement of attitudes.

Finally, from this discussion on the techniques employed to measure attitudes, it can be said that most of the objective techniques used were those that attempted to measure attitudes by an experimental directed response to an experimental controlled situation. Most of the objective attitude tests described in this thesis fall in this classification.

The more subjective methods employed were "The Life History", and "The Oral Interview". Although these test methods attempted to measure real conduct in actual situation, it was discovered that the test methods and techniques were not as reliable and valid as were the more objective techniques.

CHAPTER IV.

RELIGIOUS ATTITUDE TESTS.

Introductory Statement:

It was pointed out in the first chapter of this study that in the processes of religious education one of the most significant factors was development or the modification of attitudes.

According to Ernest Chave,[1] one of the most important concerns of religious workers today is to measure how far habits of conduct that are in accordance with modern religious ideas have been established, and how far attitudes and values that express the religious tendencies considered to be directed toward the realization of the highest good for the individuals themselves and for the society of which they are members, have been developed in individuals and in groups of persons. These attitudes involve tendencies toward the institutions of religion - its symbols, its literature, its expressed doctrines, its concepts, ideals, programs, and other phases of religious living.

It is highly important that a short discussion should be devoted to a study of a few of the more important religious attitude tests because:

(1) Some of the finest attitude tests and measuring techniques developed in the field of religious education. For example: (a) Thurstone and Chave's "Scale for the Measuring of Attitudes Toward the Church" and also their scale for measuring "Attitude Toward God",

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1 Preface of the monograph The Measurement of Attitude by Thurstone, L. L., Chave, E. J. p. ix.

(b) G. B. Watson, "The Measurement of Fair-Mindedness".

(2) The early classic study of James Leuba on the "Belief in God and Immortality" served as one of the first attempts to measure religious attitudes; and more particularly, because he presented to present day experimenters an original study that many of them used to construct their more highly objective tests.

(3) The results obtained from the religious attitude tests, described here, yield distinct evidences that attitudes are measurable phenomena.

The plan of study in this chapter will be as follows:

(1) The results of the religious prejudices found in Watson's "Test of Fair-Mindedness".

(2) A description and evaluation of Leuba's study - "The Belief in God and Immortality".

(3) The results of Bain's study of the "Religious Attitudes of College Students" compared with the results that Leuba found ten years earlier.

(4) George Dudycha's study of "The Religious Beliefs of College Freshmen".

(5) L. L. Thurstone and E. J. Chave's study - "A Scale For Measuring Attitudes Toward the Church", with a

description and evaluation.

(6) Other Religious Attitude tests with a short description of each test.

No detailed discussion or evaluation will be given in this chapter on Religious Attitude tests. Rather, the purpose is to point out the significant results obtained from the measuring techniques used. The techniques will be mentioned, but since, no new techniques are introduced, no detailed discussion or evaluation will be given.

1. The Results of Watson's test of "Fair-Mindedness".

One of the most interesting tests that revealed religious attitudes, was the study made by G. B. Watson on "The Measurement of Fair-Mindedness".

Since a complete discussion was given in the third chapter, to the construction and evaluation of the test, this discussion will present some of the outstanding results of the of the investigation.

Watson studied a number of religious groups in order to obtain and to discover their prejudiced attitudes. After this study was made he compared these groups with each other. The following group comparisons present some of the significant facts that Watson discovered.

Note: * indicates outstanding lines of prejudice.

1. Comparison Number One:

Methodist ministers in a mid-western state compared with students entering Union Theological Seminary.

The Methodist ministers displayed prejudices in agreement with:

1. Economic liberal, desiring mild reforms.
2. Capitalist, favoring economic status quo and opposing radicals.
* 3. Personal communion and mysticism.
* 4. Fundamentalism
5. Roman Catholicism
* 6. Strict puritanical morals and amusements.

The students entering Union Theological Seminary displayed prejudices in agreement with:

1. Radical on economic questions; opposed to capitalism.
2. Social gospel in contrast with individual salvation.
* 3. Religious radical.
* 4. Free loose morals.

2. Comparison Number Two:

Roman Catholic students in a normal school compared with Protestant students in the same school.

The Catholic students displayed prejudices in agreement with:

* 1. Protestantism (This was the only item in which the Catholic students displayed more prejudice).

The Protestant students displayed prejudices in agreement with:

1. Personal communion, mysticism.
2. Fundamentalism.
* 3. Roman Catholicism.

3. Comparison Number Three:

Methodist ministers under forty years of age compared with Methodist ministers in the same conference over forty years of age.

Younger ministers displayed prejudices in agreement with:

* 1. Christian modernism, liberalism
2. Religious radical.
3. Roman Catholicism.
4. Free loose morals.

Older ministers displayed prejudices in agreement with:

1. Radical on economic question; opposed to capitalism.
* 2. Fundamentalism
3. Economic liberal desiring mild reforms.
* 4. Strict puritanical morals and amusements.

4. Comparison Number Four:

Methodist ministers having had less college education compared with Methodist ministers having had college and theological seminary training.

The non-college trained ministers displayed prejudices in agreement with:

1. Capitalist, favoring economic status quo and opposing radicals.
2. Personal communion, mysticism.
* 3. Fundamentalism
* 4. Strict puritanical morals and amusements.

The college and theological trained ministers displayed prejudices in agreement with:

* 1. Radical on economic questions; opposed to capitalism.
2. Religious radical.
3. Free, loose morals.

5. Comparison Number Five:-

Theological students in Union Theological Seminary compared with students in Christian Ethics course at Yale Divinity School.

The Union Theological students displayed prejudices in agreement with:

1. Social gospel in contrast with individual salvation.
* 2. Religious radical.
* 3. Free, loose moral.

The Yale Divinity students in Christian Ethics displayed prejudices in agreement with:

1. Personal communion, mysticism.
* 2. Fundamentalism.
* 3. Strict puritanical morals and amusements.

Therefore, since this test of Watson's possesses a fairly high degree of reliability and validity, it is safe to say that these results are good evidences of prejudice attitudes as contrasted with fair-mindedness upon certain religious and economic issues.

2.

The Study: The Belief in God and Immortality, James Leuba.

This psychological, anthropological and statistical study was reported in a book by the title given above. It was published by The Open Court Publishing Company, of Chicago and London in 1921, second edition. (First edition in 1916).

Range: College ages to older adult ages.

Purpose: The purpose of the study was to find out what American college students, scientists, historians, sociologists, and psychologists believed about God and immortality.

Nature of the Study: Three investigations were made by Leuba:

Investigation A: The Belief in God Among American College Students.
Investigation B: The Belief in Immortality in an American College.
Investigation C: The Belief in God and in Immortality among American Scientists, Sociologists, Historians, and Psychologists.

A study of these investigations will be made at this point. Each investigation will be analyzed.

1. Investigation A:

The following questionnaire was given to nine colleges of high rank and to two classes of a normal school.* One thousand answers were received, 97 per cent of which were from students between 18 and 20 years of age.

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* The normal school classes were ruled out at the time the results were tabulated in order to insure greater homogeneity.

The Questionnaire Upon The Belief in God.

Introduction:

The purpose of the following questions is to find out what are your real beliefs concerning God. We know well enough what people are supposed to believe, but we have little opportunity of finding out what they actually believe.

Not what one should or would like to believe, but what one really believes is asked for in these questions.

Be as clear and definite as you can be without going beyond the truth, but do not refuse to answer because you cannot be otherwise than indefinite. The very lack of definiteness is a fact well worth ascertaining. The answers need not be signed, but the approximate age is desired.

1. Do you think of God as a personal or impersonal being?

2. What difference do you make between a personal and impersonal being?

3. Describe as fully as you can how, under what image or images, you think of God. Distinguish here between what in your description is for you merely an image, a form of speech, and what is reality.

4. What difference would the non-existence of God make in your daily life?

This questionnaire was distributed in the class by the instructor who had been directed to read to the class the remarks printed as "introduction" to the students, and warned against discussing them. The students were then allowed the remainder of the class period to formulate their answers. In order to encourage complete freedom of expression, signatures were not requested. 927 answers were received. 289 from men and 638 from women. Most of these students were in their first year of psychology and

philosophy and nearly all of them in their first semester.

Results: The results of Investigation A.

1. 31 per cent of the men and 11 per cent of the women conceive God as personal. If the doubtful cases are added, the percentages rise to 40.5 per cent for the men, and to 15.7 for the women.

2. Two thirds of the men and nearly half the women disclaim any mental picture of God. Of 290 men, 39 per cent imagine God in human form. To 80 of these the form is mere symbol; to 20 it is a reality; while 7 find it impossible to decide whether the image represents the reality or is a symbol. Of 640 women, 34.5 per cent picture God in human shape. Of these, 166 state definitely that the image is a mere symbol, 42 think the image is actually the reality, while 13 cannot decide. Seven per cent of this group hold to a thoroughly anthropomorphic conception of God.

3. 32 per cent of the women declare that the non-existence of God would make no difference at all in their lives. If the doubtful cases are added, the proportions become 43 per cent for the men and 22 per cent for the women.

2. Investigation B:

This investigation dealt exclusively with the belief in immortality in one college of high rank and moderate size, whose students were divided in their affiliation among all the Protestant denominations. It included also a few Roman Catholics. The spirit of the institution was assuredly as religious as that of the average American college. Freshmen, Sophomores, Juniors, and Seniors of the college were given the opportunity to answer the following set of questions divided into three parts:

1. The existence of the belief in immortality.
2. Its influence upon the individual life.
3. The grounds upon which the belief is held.

Ninety per cent of all the students answered the questions. This group of questions was distributed by students to the rooms of all the students in residence on a particular Sunday morning, between nine and ten o'clock and were collected just before lunch on the same day. The non-residents received the questionnaire the following day.

The investigation was announced previously in the classes by the professors, but the nature of the investigation was not given.

The great desirability of having every one answer in order to make the information gathered valuable for statistical purposes was emphasized, and the directions printed at the head of the questionnaire were read to the students without comment.

When it was found that a considerable number of freshmen and sophomores had failed to answer the questions, an effort was made to complete the statistics from these two classes. Students of the upper classes interviewed the freshmen and the sophomores and placed the questionnaire directly or indirectly in the hands of those who had not answered.

Results:

1. 15 per cent of the freshmen reject immortality and 4 per cent are uncertain. 32 per cent of the juniors have given it up, and 8 per cent more are uncertain. 24 per cent of the seniors are disbelievers and 6 per cent uncertain. In other words:

   80.3% of the Freshmen believe in immortality.
   76.2% of the Sophomores believe in immortality.
   60.0% of the Juniors believe in immortality.
   70.1% of the Seniors believe in immortality.

2. The statistics reveal the interesting fact that a considerable number of believers do not think the loss would have any influence upon their lives; immortality is for them a fact without vital significance.

3. 25 per cent of those who cannot declare a belief in immortality, nevertheless desire it;and of these, four-fifths belong to the two upper classes in college.

3. Investigation C:

This investigation set out to discover the belief in God and in immortality as displayed by scientists, sociologists, historians, and psychologists. Leuba used the membership lists of the American Historical Association, of the American Psychological Association, of the American Sociological Association, and the volume American Men of Science to obtain the names of subjects used in this inquiry.

Two forms of questionnaires were sent. The first form was sent to five hundred scientists of great rank, while a slightly different form was sent to five hundred scientists of lesser rank and also to the other groups, the historians, the sociologists, and the psychologists. These questionnaires were printed and mailed to all the subjects. The First Form is as follows:

A Statistical Inquiry.

Introduction: The accompanying questions are sent to five hundred persons taken by chance from those listed in the American Men of Science, in the hope of securing statistics valid for this whole group. The condition of success is that all those addressed respond. No satisfactorily definite conclusions could be drawn if many of those addressed refused or neglected to answer.

It will take you only a few seconds to make a mark to the right of every statement that is true for you. Please do it and return it in the enclosed stamped envelope. Your answer may be anonymous.

A. Concerning the Belief in God.

1. I believe in a God in intellectual and affective communication with man, I mean a God to whom one may pray in the expectation of receiving an answer. By "answer" I do not mean the subjective, psychological effect of prayer. _____

2. I do not believe in a God as defined above. _____

3. I am an agnostic. _____

B. Concerning the Belief in Personal Immortality.

1. I believe in (personal immortality for all men. _____
(conditional immortality, i. e.
(for those who have reached a
(certain state of development. _____

2. I believe neither in conditional nor unconditional immortality of the person. _____

3. I am an agnostic. _____

4. Although I cannot believe in personal immortality, I desire it (intensely _____
(moderately _____

5. I do not desire personal immortality. _____

Second Form.

Introduction: Same as in first form.

A. Concerning the Belief in God.

1. I believe in a God to whom one may pray in the expectation of receiving an answer. By "answer" I mean more than the subjective, psychological effect of prayer. _____

2. I do not believe in a God as defined above . _____

3. I have no definite belief regarding this question. _____

B. Concerning the Belief in Personal Immortality, that is, the Belief in Continuation of the Person after Death in Another World.

1. I believe in (personal immortality for all men _____
(conditional immortality, i. e., (immortality for those who have (reached a certain state of (development. _____

2. I believe neither in conditional nor in unconditional immortality of the person in another world. _____

3. I have no definite belief regarding this question. _____

4. I desire personal immortality (intensely _____
(moderately _____
(not at all _____

Results: A Summary of the results for each group will be given here.

I. The Scientists.

This part of the investigation was based upon answers received from 1000 persons chosen by rule of chance. This group was separated into divisions of 500 each; and these again fell into two divisions including 300 persons of lesser, and 200 of greater distinction. Every other group in the investigation was divided into "lesser" and "greater" men. This selection was done by a supposedly competent judge. The results obtained were as follows:

1. Belief in God:

		Per Cent Believing
Division I.		
	Greater Scientists	35.5%
	Lesser Scientists	51.0%
	Both	45.2%
Division II.		
	Greater Scientists	47.7%
	Lesser Scientists	45.5%
	Both	38.4%

2. Belief in Immortality:

Division I		
	Greater Scientists	37.7%
	Lesser Scientists	66.5%
	Both	55.5%

3. The following results are listed from the comparison of the Physical with the Biological Scientists of the Second Division.

1. Belief in God:

Physical Scientists:	Per Cent Believing
The Greater	34.8%
The Lesser	49.7%
Both	43.9%

Biological Scientists:

The Greater	16.9%
The Lesser	39.1%
Both	30.5%

2. Belief in Immortality.

Physical Scientists:

The Greater	40.0%
The Lesser	57.1%
Both	50.7%

Biological Scientists:

The Greater	25.4%
The Lesser	45.1%
Both	37.0%

4. The following results are listed from the two divisions on the desire for immortality.

1. The Physical Scientists.

The Greater	67.7%
The Lesser	83.8%

2. The Biological Scientists.

The Greater	60.4%
The Lesser	70.7%

A Summary of these results would indicate that the "greater" scientists expressed less belief in God and in immortality in both divisions of the group; and that the "lesser" scientists expressed a greater belief in God and in immortality in both divisions of the group. In the physical scientists we find that they expressed a lesser belief in God, in immortality, and a less desire for immortality than did the biological scientists.

II. The Historians:.

A list of 375 persons was taken from the membership list of the American Historical Association. One hundred of these men were selected as "greater" historians, and one hundred and two were selected as "lesser" historians. The other names were disregarded.

The results were as follows:

		Per cent Believing
1. Belief in God.		
	Greater Historians	32.9%
	Lesser Historians	63.0%
	Both	48.3%
2. Belief in Immortality.		
	Greater Historians	35.3%
	Lesser Historians	67.6%
	Both	51.5%

3. Desire for Immortality.
Forty-five per cent of the non-believers desire immortality either moderately or intensely. Of the believers, only one affirms the absence of desire. The number of greater men who do not desire immortality is nearly double that of the lesser men in the same situation.

III. The Sociologists:

Leuba selected 23 great professors of Sociology, and 25 more according to the rule of chance from the membership list of the American Sociological Association. Of the non-teaching sociologists 149 were selected.

The results were as follows:

	Per cent Believing.
1. Belief in God.	
Greater professors	19.4%
Lesser professors	29.2%
Non-professors	54.6%
Professors and non-professors	46.3%
2. Belief in Immortality.	
Greater professors	27.1%
Lesser professors	52.2%
Non-professors	61.2%
Professors and non-professors	55.3%

3. The Desire for Immortality.
The only point deserving mention is the large proportion of the non-professional group who desire immortality intensely.

IV. The Psychologists:

For this group, Leuba selected 288 names. He eliminated all those who did not teach psychology, those who taught in Roman Catholic institutions, and those who were decidedly educators or philosophers rather than psychologists.

The results were as follows:

	Per cent Believing.
1. Belief in God.	
Greater psychologists	13.2%
Lesser psychologists	32.1%
Both	24.2%
2. Belief in Immortality.	
Greater psychologists	8.8%
Lesser psychologists	26.9%
Both	19.8%

One of the most interesting items revealed here is that whereas in every preceding group, the number of believers in immortality is substantially larger, and in the case of the sociologists, very much larger than the number of

believers in immortality is clearly less than that of the believers in God. Only three of the greater psychologists declare a belief either "in unconditional or in conditional immortality". Taken altogether, the teaching sociologists give 49 per cent of believers in immortality as against 24.4% per cent of believers in God, the psychologists, 19.8 per cent as against 24.2 per cent.

Leuba makes this statement in regard to this conclusion "In the present phase of psychological science, the greater one's knowledge of psychical life, the more difficult it is to retain the traditional belief in the continuation of personality after death."[1]

3. Desire for Immortality.
   Although the number of those who do not desire immortality (47.2) is far greater in this than in any other group, nevertheless, the desire remains, not only in the small number of believers, (with one exception), but also in addition, in 34.7 per cent of the non-believers.

Evaluation:

This investigation of Leuba's proposed to discover the beliefs in God and immortality held by college students, and professional groups. It can be seen on examining the results that this investigation revealed the beliefs of these two groups.

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1 Leuba, James "The Belief in God and Immortality", p. 268

The technique used by Leuba did not reveal the intensity of the subject's answers. The measurement revealed the fact that the subject's either believed in God or immortality or did not believe in God or immortality. Doubt and uncertainty in answers were recorded occasionally. The degrees of belief or unbelief were not measured. Leuba did receive some interesting answers from the questionnaires that were sent to the professional groups, because some of the answers indicated a very strong degree of belief or disbelief. Many of the subjects described in detail their beliefs or disbeliefs, which was then more of a measure of the intensity of belief.

This investigation is important in a number of ways. First of all, it was one of the first investigations attempting to record beliefs or disbeliefs of subjects, concerning their views on God and immortality. The investigation included. exceptionally large groups of cases so that Leuba, at least, set forth the results of a fairly representative study of a number of groups.

The study was of great importance for the information it revealed. Leuba[1] was the only investigator up to that time who made such an extensive survey, so that when the results were

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1 Bain, Read "Religious Attitudes of College Students", The American Journal of Sociology, Vol. 32, p. 762.

published, many other investigators were started on a path to determine other types of beliefs and attitudes in various subjects.

3. The Results of Bain's Study Compared with Leuba's Study.

In the last chapter a discussion of Bain's test on "Religious Attitudes of College Students" was presented with a complete description and evaluation. No mention was made, however, as to the results obtained. A summary of Bain's findings will be given at this time.

Bain attempted to discover religious attitudes of college students. Two hundred cases were used: 122 girls, 96 of whom were underclassmen, 20 Juniors, and 7 Seniors; 78 boys, 44 underclassmen, 10 Juniors, and 16 Seniors.

Bain's discoveries are significant. He not only presents the results he obtained, but he also compares his results with those that Leuba discovered.

The following table[1] gives the names of the questions of the test, the number of students answering each question and the percentages in each group answering in the affirmative.

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1 Bain, R. "Religious Attitudes of College Students", American Journal of Sociology, Vol. 32, p. 714.

Religious Attitudes of 200 College Students.
(78 male 122 female)

	ALL		FEMALE		MALE		SENIOR MEN	
	No.	Yes %	No.	Yes %	No.	Yes %	No.	Yes %
(1)	(2)*	(3)	(4)*	(5)	(6)*	(7)	(8)*	(9)
1. Is God a Person?	192	15.1	115	15.7	63	15.9	16	7.1
2. Is God an impersonal Force?	182	67.6	106	62.3	61	67.2	16	66.6
3. Does God interfere in the world by providences, miracles, etc?	192	47.2	113	44.2	60	39.3	16	37.5
4. Was Jesus Very God?	192	34.4	110	41.3	68	30.9	16	37.5
5. Was Jesus a manifestation of God?	190	62.6	110	62.7	63	57.1	16	50.0
6. Was Jesus human only?	194	35.6	111	35.1	68	38.2	16	62.5
7. Was Jesus born of a virgin?	187	66.3	109	68.3	64	67.2	16	66.6
8. Was the Bible verbally inspired by God?	192	18.7	113	27.4	63	6.4	16	6.6
9. Is the Bible a general inspiration from God?	190	69.5	113	69.6	66	66.7	17	53.3
10. Is the Bible a historical account?	196	85.7	115	84.3	66	83.3	16	91.7
11. Is the Bible a mythological account?	197	62.9	112	62.5	68	57.4	16	72.8
12. Do you believe in the resurrection of the body?	184	32.0	108	35.2	60	31.7	16	28.5
13. Do you believe in the eternal life of the spirit?	187	76.5	102	81.4	65	64.6	16	66.6

14. Do you believe that personality persists after death?	178	30.3	104	28.8	61	34.4	16	53.8
15. Do you believe in reward and punishment after death?	188	40.4	103	45.6	55	49.1	16	35.7
16. Do you believe in abstaining from work on Sundays for religious reasons?	194	31.4	114	36.3	68	22.1	16	18.7
17. Do you favor laws compelling Sunday observance?	198	27.3	115	32.2	69	15.9	16	25.0

* Columns 2, 4, 6, 8 contain the total number answering each question.

Bain states that it is commonly believed that a college education tends to liberalize the religious views of students. Leuba also holds this point of view. Let us examine some of the data of the table. Columns 8 and 9 give the percentages for 16 Senior men. The small number makes generalization impossible, but on all except a few questions the Seniors were more unorthodox than the other boys by substantial percentages. On belief in God as a person, the Seniors show a percentage of 7.1 while the other boys show 15.9; on the humanity of Jesus, Seniors 62.5, other boys 38.2; inspiration of the Bible 53.3 and 66.7; the mythological nature of the Bible, 72.8 and 57.4; reward and punishment after death, 35.7 and 49.1. Of the seventeen questions all but 2 and 5 may be regarded as

indicative of liberal and conservative views. On 11 of these 15 questions the Seniors were apparently more unorthodox than the other boys; on immortality (13 and 14) they were more conservative and likewise on compulsory Sunday observance.

In general then Leuba's and Bain's contention that college education tends toward liberalization is confirmed, although Leuba found Freshmen and Senior percentages of belief in immortality to be 80.3 and 70.1; while Bain's figures were 34.4 and 53.3. This is a marked reversal, however, this was almost the only question on which Bain's Seniors were more orthodox.

Bain[1] sets up four striking differences between his findings and Leuba's findings:

(1) Leuba's percentage of male belief in a personal God is 3.5 times as great as Bain's; female belief, 5.2 times as large; 4.7 times as large for the whole group.

(2) Bain's group is more homogeneous; Leuba's men are much more liberal than the women.

(3) Bain's men's percentages of belief in an impersonal God is 2.2 times as great as Leuba's; Bain's women's percentage of belief in an impersonal God is 3.4 times as great; average of Leuba's group, 21 per cent, Bain's 67.6 per cent.

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1 Bain, R "Religious Attitudes of College Students", American Journal of Sociology, Vol. 32, p. 766.

(4) Leuba's group percentage for belief in immortality is 2.4 times as large as Bain's.

Bain offers three possible explanations of these differences:

(1) That Leuba's figures for belief in immortality are from one school. Leuba does not state whether or not it was denominational;

(2) That the "West" may be less orthodox than the "East";

(3) That there may have been a shift toward unorthodox attitudes on these questions during the last decade.

One outstanding feature of Bain's study is the apparent inconsistency in some of the attitudes. Some of the outstanding inconsistences are as follows:

(1) 67.2 per cent of the group hold that God was an impersonal force, yet 38.3 per cent of the same group hold that God interfered by providences and miracles.

(2) 38.2 per cent believed that Jesus was human only and yet 67.2 per cent believed he was born of a virgin.

(3) 15.4 per cent believed that the Bible was a historic account, yet 42.7 regarded it as mythological.

Bain's conclusion was that the Seniors appeared least consistent, boys next, then the girls who were more consistent than either of the other groups.

Bain considers this entire study on a tentative basis on account of the small number of cases used in the study. Bain offers the following conclusions.

(1) The men and women do not differ as much in their religious attitudes as Leuba's findings on belief in God and immortality would lead us to expect.

(2) The men appear to be more liberal than the women on all questions except persistence of personality after death, and punishment after death.

(3) The sixteen Senior men are considerably more liberal than both men and women except on persistence of personality.

(4) There is great apparent inconsistency in religious attitudes. The men seem to exceed the women in this respect.

(5) The traditional views on God, Jesus, immortality, inspiration of the Bible, hell, Sunday observance, etc., appear to receive only small acceptance in this group of college students. The comparison with Leuba's figures on belief in God and immortality clearly shows either a marked increase of unorthodoxy on these subjects or that western students are far more liberal than eastern students.

The Study: Religious Beliefs of College Freshmen.
George J. Dudycha.

The report of this study can be found in "School and Society, Vol. 31, No. 789, Feb. 8, 1930.

Range: College level (Freshmen)

Purpose: The purpose of this study was to discover the religious beliefs of college Freshmen.

Nature of the Study: This study was made on the beginning Freshman class at Ripon College at the beginning of the school year 1929-1930. The students made their responses to the propositions before they attended a single lecture or received any academic instruction. Thus their judgments were not influenced by college instruction but were made in accord with the beliefs and attitudes which they brought to college from their various communities.

Each student was confronted with a printed sheet bearing twenty-five religious propositions, which are given in the following table. The list of propositions was prefaced with the following instructions:

"Opposite each of the following propositions, make a cross (x) in one of the five columns, according to your belief.

Under A - if you implicitly believe.
Under B - if you are inclined to believe but doubt.
Under C - if you do not know whether you believe or do not believe (non-committal)
Under D - if you are inclined to disbelieve and doubt.
Under E - if you absolutely do not believe."[1]

The following table presents the list of religious propositions that are included in Dudycha's questionnaire with the per cent of individuals who believed each proposition.

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1 From George J. Dudycha's Study, "The Religious Beliefs of College Freshmen", School and Society, page 207. Vol. 31.

THE RELIGIOUS PROPOSITIONS	PER CENT BELIEVING
1. Ten Commandments should be obeyed	98
2. Existence of God	96
3. Divinity of Jesus Christ	93
4. Existence of the soul	92
5. Christ died to save sinners	90
6. Sunday is a holy day	91
7. Forgiveness of sin	86
8. Power of prayer	87
9. Genuineness of Christ's miracles	84
10. Reality of sin	84
11. Virgin birth of Christ	82
12. Bible is the word of God	81
13. Existence of heaven	77
14. Holy Spirit	75
15. Sacrament of baptism	73
16. Fatherhood of God	77
17. Man is saved by faith not by works	72
18. Resurrection of the body	64
19. A day of final judgment	65
20. Immortality	63
21. Existence of hell	58
22. Present day miracles	51
23. World was created in six solar days	47
24. Existence of angels	49
25. Existence of the devil	47

In order to make certain that the responses checked by the students did express their beliefs and attitudes, the subjects were given a second list of religious propositions after a lapse of about twenty-five minutes during which the students were occupied with other tests. The second list contained the same propositions except that the statement of each was contrary to that of the first list. Thus, if a student marked a proposition "A" in test one, he marked it "E" in test two, if he were consistent in his belief.

Since test one was collected before the distribution of test two, since during the twenty-five minutes which elapsed before submitting the second test the subjects were intensely occupied, and since no information was given concerning the second test, test two was in all probability responded to as a novel situation. Dudycha says:"The chance that students remembered their responses to the propositions in test one and made their responses in test two accordingly is very, very small. Their responses to the concepts in test two were determined solely by their beliefs and attitudes."[1]

The results of the two tests were correlated and the correaltion proved to be .931, which indicates that the students did know what they believed and that their responses in test one are reliable.

A score was determined for each student by giving each response a value. In test one the following values were given: A plus 2, B plus 1, C zero, D minus 1, E minus 2. In test two, the following values were given: A minus 2, B minus 1, C zero, D plus 1, E plus 2. The valued responses of test one were added, thus giving a score which was correlated with the score similarly obtained for test two.

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1 Dudycha, G. J. "The Religious Beliefs of College Freshmen", School and Society, Vol. 31, p. 207.

The results obtained for the ninety-seven subjects who participated in the investigation are given in the following table which indicates the per cent of belief and disbelief for the average student in the whole group and in particular, denominations.[1]

The Per Cent of the Propositions Believed.

Denomination	No. of cases	A	B	C	D	E
All denominations	97	60	15	12	05	08
Catholic	13	77	09	07	02	05
Lutheran	19	68	19	06	05	02
Presbyterian	10	62	17	13	03	05
Methodist	22	57	13	16	05	09
Congregational	23	51	18	15	05	11
Miscellaneous	10	46	18	14	10	12

From this table it will be observed that the Catholics had the largest per cent of A's or absolute belief, the Lutherans were second, Presbyterians third, Methodists fourth, Congregationalists fifth, and the miscellaneous group composed of Episcopals, Christian Science, Reformed, and Baptist sixth. Upon further examination we see that for the whole group 75 per cent of the propositions are believed, and for the denominations, the range is from 87 per cent (in the case of the Lutherans) to 64 per cent (in the case of the miscellaneous group). Thus the range of disbelief and non-commital is from 13 per cent to 36 per cent

1 Dudycha, G. J. "The Religious Beliefs of College Freshmen", School and Society, Vol. 31, p. 207.

of the propositions.

Results of the Study:

It is rather significant that the proposition which ranks first, being believed by 98 per cent of the individuals is "The ten commandments should be obeyed", and that the belief in the existence of God, believed by 96 per cent of the subjects, ranks second. The divinity of Christ ranks third, and that He died to save sinners fifth, but the virgin birth ranks eleventh. The "existence of the soul" ranks high, being in fourth place. The proposition which ranked lowest was the "existence of the devil"; second lowest, "existence of angels", and two tied for third lowest, "present day miracles", and "world was created in six solar days."

According to Dudycha, this study indicates that college Freshmen have definite attitudes and convictions. They are more inclined to believe than to disbelieve; they are not, for the most part, lukewarm in their beliefs. They believe firmly in the ten commandments, the existence of God, the divinity of Jesus Christ, the existence of the soul, and the mission of Christ, but are inclined to disagree concerning the existence of the devil and of angels. Taking the group as a whole, there is not a single proposition which is believed more than it is disbelieved.

Evaluation:

This study measured what it purported to measure, namely religious beliefs of college freshmen.

Since this test was given before the students had studied any Bible, or any religious subject, it would serve as a good information study to the professors of Bible or related religious subjects. It could be used after a period of study, or a second form would be better, to indicate the growth of belief, favorable or unfavorable, to the religious proposition used in the test.

The test is important because it does display the attitudes of the subject in regard to his belief or disbelief in a certain religious proposition.

The measuring technique enables the investigator to see the intensity of belief or disbelief, because of the five point scale. This type of technique is more valuable than just a "Yes" or "No" answer.

The Study: A Scale for Measuring Attitudes Toward the Church, L. L. Thurstone E. J. Chave.

The results of this study were presented in the monograph "The Measurement of Attitude" by L. L. Thurstone and E. J. Chave, published by the University of Chicago Press, Chicago, Illinois, 1929.

Range: Approximately from 16 years of age through the adult ages.

Purpose: The purpose of this study was to set up a scale that would be a valid measuring instrument of attitudes, and to construct a scale that would measure attitudes toward the church.

Nature of the Study: From a list of 130 statements of opinion in regards to the church, a final list of 45 statements of opinion was selected. The selection was made with consideration of the criterion of ambiguity, the criterion of irrelevance, the scale values, and by inspection of the statements. These criteria were discussed in Chapter III in a study of Thurstone's "Scale for Measuring Attitudes Toward the Movies". The opinions were so scaled that they

represented as nearly as possible an evenly graduated series covering the whole range of opinions from very favorable attitudes through neutral attitudes to attitudes very unfavorable to the church. The measuring technique used here was the method of equal-appearing intervals which was discussed in the last chapter.

The scale value assigned to each statement was determined by the method of equal appearing intervals. The scale value thus became the score for the statement. A single score for the test can be obtained by adding the scale values of the statements, and dividing by the number of statements checked.

The score may be interpreted by means of the following descriptive phrases if so desired:

Score	Interpretation
From 0 to 1.5	Strongly favorable to the church
1.5 to 3.0	Favorable to the church
3.0 to 4.5	Favorable with some reservations
4.5 to 6.5	Wavering in attitude
6.5 to 8.0	Slightly unfavorable
8.0 to 9.5	Antagonistic
9.5 to 11.0	Strongly antagonistic.

The following illustration is an example of the test. Although the example lists the statements beginning with the most favorable to the most antagonistic, this does not hold for the actual test, because the statements are in random order. The scored do not appear next to the statement in the actual test, but are

indicated here in order to illustrate the scale value of the question.

A Scale For Measuring Attitude Toward the Church.

This space has been prepared for studying people's attitudes toward the church. You are asked merely to check all the opinions that express your own sentiments. Let your own experience with churches determine your judgments.

Then a personal data list follows asking for name, sex, religious affiliation, church relation, church attendance, education completed, vocation, and several lines for other comments.

Check ( ) every statement with which you fully agree:

8. (.5)* I feel the church is the greatest agency for the uplift of the world.

14. (1.3) I believe that the church furnishes the stimulus for the best leadership of our country.

34. (2.1) I feel that church attendance is a good index of the nation's morality.

13. (3.6) I believe in the ideals of my church, but I am tired of its denominationalism.

44. (4.9) I have a casual interest in the church.

15. (6.3) I'm not much against the church, but when I cannot agree with its leaders, I stay away.

12. (7.6) The church is too conservative for me and so I stay away.

16. (9.0) I regard the church as hopelessly allied with reactionary forces.

4. (10.2) I regard the church as a monument to human ignorance.

45. (11.0) I have nothing but contempt for the church.

*Scale value or score.

The reliability coefficient for this scale is based upon 150 cases taken at random from the different groups. The reliability by the split-halves method is .80. Extended to twice the length by the Spearman-Brown formula it is .89.

Results of the Study:

The results of the experimental test given to several groups will be summarized by the following tables* taken from the study made by Thurstone and Chave.

The following table gives the distribution of attitude in several groups with the number of subjects in each group, and the average scale value for each group:

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* Thurstone, L. L. Chave, E. J. "A Scale For Measuring Attitude Toward the Church", p. 67 to 79.

Distribution of Attitude in Several Groups.

SCALE	FRESHMEN		SOPHOMORES		JUNIORS		SENIORS		GRAD. STUDENTS		DIVINITY STUDENTS		CHICAGO FORUM	
	F	P	F	P	F	P	F	P	F	P	F	P	F	P
0-0.9	52	.095	1	.008	10	.093	2	.019	10	.048	17	.165	23	.127
1-1.9	129	.236	24	.189	22	.206	24	.224	49	.234	52	.504	28	.155
3-3.9	92	.168	23	.182	15	.140	19	.178	36	.171	24	.233	14	.077
4-4.9	69	.126	17	.134	15	.140	16	.150	29	.138	5	.049	17	.094
5-5.9	62	.113	16	.126	15	.140	13	.121	13	.062	4	.039	15	.083
6-6.9	69	.126	24	.189	14	.132	17	.159	26	.124	1	.010	20	.110
7-7.9	43	.078	14	.110	10	.093	10	.093	24	.114	-	---	26	.144
8-8.9	27	.049	4	.031	6	.056	4	.037	15	.071	--	---	28	.155
9-9.9	5	.009	4	.031	--	---	2	.019	5	.024	--	---	10	.055
10-10.9	--	---	--	---	--	---	--	---	3	.014	--	---	--	---
TOTAL	548	1.000	127	1.000	107	1.0	107	1.0	210	1.0	103	1.0	181	1.0
AVERAGE	4.42		5.04		4.57		4.78		4.86		2.82		5.36	

F - frequency
P - proportion

From this table it will be seen that the divinity students concentrate more strongly in favor of the church than any of the other groups. The Chicago Forum has the highest score, indicating that this group is, on the average, more frankly antagonistic to the church than any of the student groups. The four undergraduate classes do not show any distinct trend to become more in favor of or more against the church as they progress through college. The graduate students score about the same, on the average, as the undergraduates.

The following table presents the dispersion of attitude scores according to the different groups:

Dispersion of Attitude Score.

The Groups	Standard Deviation of Scores.
Freshmen	2.07
Sophomores	1.93
Juniors	2.02
Seniors	1.93
Graduate Students	2.27
Divinity Students	0.96
Chicago Forum	2.56

From this table it will be seen that the dispersion of scores is approximately the same for the four undergraduate classes. The variability in attitude increases for the graduate students. The divinity students have the smallest scatter and the Chicago Forum shows the widest scatter in attitudes toward the church.

Other results which Thurstone and Chave obtained are as follows:

(1) That the Catholics as a whole have a strongly favorable attitude toward the church.

(2) That the Jews as a whole are more indifferent and more frequently antagonistic toward the church.

(3) That the Protestants occupy an intermediate position on the scale.

(4) That the women are slightly more favorable to the church than the men.

(5) That those who are more active church members have more favorable attitudes toward the church than those who are not active in the church.

Evaluation:

This test does measure the attitudes of individuals toward the church. The test is of great importance to religious workers because it enables the administrator to discover whether or not the students of his church or parish have favorable or unfavorable attitudes toward the church.

If unfavorable attitudes are portrayed, the curricula study can be adjusted to find out why the student possesses a certain attitude would help to diagnosis his case.

As to the usefulness and value of this type of measuring technique, it can be said that this is one of the best. A detailed discussion of this technique was given in Chapter Three.

This test is practical. The subject can be given as long a time as necessary to take the test. Usually fifteen to

twenty-five minutes is ample time. The personal data section at the beginning of the test is valuable because it aids in diagnosing the test results. Complete directions for administering the test are given. The manuel of direction helps the tester to interpret his results.

Finally, it can be said that this test, and the test technique for measuring attitudes is one of the best tests available for a reliable instrument to measure attitudes toward the church.

Other Religious Attitude Tests.

There are four other religious attitude tests that should be mentioned. These tests have been very prominent and are used to a great extent among religious leaders. A short description will be given about these tests.

(1) Religious Thinking Test, Elementary. Revised from the "Union Test of Religious Ideas", Form I.

This test seeks to discover opinions and judgments concerning God, Jesus, prayer, the church, and Kingdom, other religions, and life purposes. Answers may be tabulated to show what the individual or group believers, or scored for agreement with the point of view (liberal-educated religious education) presented in the score sheet, or for agreement with

any other set of answers the person using the test may prefer. This test is for ages 8 to 14, grades 3 to 8.

The reliability of this 1928 revision of the test is in process for determination. The "split-halves" method applied to the former edition of the test yielded to a self correlation of .76

(2) Religious Thinking Test, Advanced. Revised from the "Union Test of Religious Ideas", Form II.

This test seeks to discover opinions and judgments concerning God, Jesus, prayer, the Kingdom of God, the church, Sunday, immortality, comparative religions, and life purposes. It is suitable for adults and may be used with intelligent high school pupils. Answers may be tabulated to show what the group believes, or scored for agreement with any desired point of view.

The reliability of this 1928 revision of the test is in the process of determination. The "split-halves" method applied to a former edition of the test yielded a self correlation of .84.

(3) The Religious Discovery Test. An experimental test by Harold Donelly.

The purpose of this test is to help the individual to discover what he thinks about certain important religious questions,

such as the factors that influence decisions, various feelings of trust or distrust in God, and various forms of belief about God. The individual indicates his degree of strength toward any of these situations by checking the item which best expresses his feeling.

The following illustration is an example of one of the test parts:

Part IV.
What Do You Believe About God?

Place a check ( ) in the column which most nearly expresses your belief.	No Very Strongly	No	Not Certain	Yes	Yes Very Strongly
1. Do you believe that God is a loving Father?					
2. Do you believe that God is the creator of the world?					
3. Do you believe that God is so kind that he will not punish any one?					
4. Do you believe that there is no God of any kind?					

(3) Attitude Toward God. Prepared by L. L. Thurstone and E. J. Chave.

This test seeks to discover what attitudes individuals have about God. Twenty statements are presented expressing different attitudes toward God. The individual checks the statements he agrees and disagrees with, and also double checks the statement with which he fully agrees. Five forms of the test are available.

The following example is from Form A.

Directions: Place a check (✓) if you agree with the statement.
Put a double check (✓✓) if you agree emphatically.
Put a cross (✗) if you disagree with the statement.

( ) 3. I trust in God to support the right and condemn the wrong.
( ) 8. It is stupid to insist that there is a God.
( )11. My idea of God develops with experience.
( )15. I have a strong desire to believe in God.
( )20. God has no place in my thinking.

(4) Religious Beliefs Northwestern University Religious Education Tests.

This test seeks to discover opinions and beliefs concerning God, Jesus, heaven, immortality, the Bible, and the church. The individual checks his degree of belief or disbelief according to his feeling about the statement.

The following illustration is an example of the test.

Column I indicates positive certainty of belief.
Column II indicates moderate certainty of belief.
Column III indicates uncertainty, absence of conviction.
Column IV indicates moderate certainty of Disbelief.
Column V indicates positive certainty of Disbelief.

	I	II	III	IV	V
1. Do you believe that God exists?					
2. Do you believe that the Devil exists as an actual being?					
36. Do you believe that Jesus was born of a virgin?					
37. Do you believe that heaven exists as an actual place or location?					
40. Do you believe in the resurrection of the body?					

A long list of religious attitude tests could be added to this discussion. For example, Thurstone and Chave of Chicago University have twenty new attitude scales planned and in preparation, that can be used to discover religious and social attitudes.

The results revealed from the use of the attitude tests described in this section have added much evidence to the fact that attitudes are measurable phenomena.

V.

GENERAL CONCLUSIONS

A. Introductory Statement:

The major proposition of this thesis is to demonstrate that attitudes can be measured. First of all, attitudes are found and manifested in all phases of life. They are important controls of behavior. An analysis of the psychological nature of attitudes reveals the facts that attitudes operate in the muscular, neural and psychic adjustments of the individual to situations and objects. The realization of the importance of attitudes in human nature, and the revelation of the sources of attitudes, brings forth methods and techniques that can be used to measure these sources of behavior. Experimenters attempt to produce life situations, in scientific test procedures so that the responses of the individual to any one of these situations will be an accurate index to the individual actual behavior.

B. The Limitations and the Contributions of Attitude Measurement.

A few general considerations regarding the measurement of attitudes will be discussed at this point. The examples of attitude tests given in this thesis do not pretend to represent all of the devices at present employed to ascertain certain stimulus-response patterns

which exists in social groups. The behavior or intercommunication which results from these action patterns is the subject matter of social psychology. As we have seen, this intercommunication is carried on chiefly by means of symbols - principally language symbols. Hence, we are approaching the study of these action-patterns - the attitudes - through attempts at securing language responses and interpreting these, not only as verbal behavior, but also as indicative of the more complete and overt adjustment tendencies. It may be that a person is largely unable to analyze his true attitude accurately. But the analysis which he does make is significant. At least his expressed attitude shows what he wants people to believe he thinks.

A number of criticisms may be made of the attitude tests presented in this thesis. In the first place, it must be kept in mind that responses to test questionnaires are speech responses to a total situation, and not only a response to the words of the questionnaire, or to the hypothetical situation they represent. All of the conditions under which the questionnaire is given are part of the situation. If the questionnaire calls for attitudes in subjects governed by strong mores, the subject's expressed attitude will tend to be the conventional attitude, especially if his name is

required on the schedule. That is, the subject will express what he thinks his attitude ought to be, rather than what his behavior in the actual situation might be. As a verbal response, his expressed attitude is still of value and interest to the experimenters.

If we knew enough about certain conditions which prevent people from revealing their true attitudes in a given situation, we could measure their influence and allow for them in our interpretation as does the physical scientist in analyzing and interpreting a situation outside of the control of his laboratory. A measure of the degree of correlation between verbal attitudes and actual behavior can be secured in many cases by a sample study of the degree to which an individual's behavior corresponds to his expressed attitude on a situation. Some experiments already show that there is a fairly high degree of correlation between overt behavior and verbal response.

In the second place, full allowance must be made in the interpretation of attitude statements for differences in language equipment, education, and general background on the part of the subjects. Ambiguity of words and misunderstandings and misinterpretations on the part of the subjects may invalidate

the replies as expressions of attitudes. These replies are, furthermore, subject to all the rationalizations which play so large a part in thinking and speech reactions.

The technique for detecting and allowing for such errors in interpretation is at present rather rudimentary. The elimination of these weaknesses in attitude research, however, must depend largely on the methods desired; first, in eliciting the attitude response; and second, in manipulating and interpreting results.

A consideration of the examples of attitude measurements given in this thesis indicate that whatever their weaknesses may be, considerable progress has been made toward a more refined technique. Certainly these methods achieve a degree of objectivity and reliability for surpassing that of empirical inquiry and informal, non-quantitative studies of life history documents. There is a great demand for reliable ways of gauging attitudes - for more accurate means of "determining the social weather".

In this discussion of the various methods of determining and measuring attitudes, there has been no desire or attempt to advocate the use of some methods to the exclusion of others. We cannot afford to neglect any method which

promises to throw light on the problems which we seek to solve. What is needed is a refinement and objectification of all methods which contribute something to the understanding of our problem. There is no desire to discredit or abandon the fullest possible use of life history documents, intensive historical studies of individual cases or institutions, and other non-quantitative approaches. What is advocated is that the technique of classifying and analyzing such information be improved in such a way as to permit scientific generalization from the data.

A test of the validity of a method is its efficacy in securing the results sought. It follows that we are justified in the use of any method if it helps to throw even a little light on the problem we are seeking to solve. From this point of view, the full utilization of historical and genetic sources, the non-quantitative description of individual cases, as well as the more rigid, objective, and quantitative test should be used as indicators of attitudes.

C. Attitudes Can Be Measured.

The writer comes to the conclusion that attitudes can be measured. Although an attitude is a very complex thing,

an analysis shows that it contains measurable substance. The tests and techniques that have been devised yield fairly reliable and accurate evidences that attitudes are measurable. While there is need of refinement and objectification of many of the techniques of attitude measurement, there is sufficient data to say that attitudes are measurable phenomena.

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